

AC motors

Synchronous motors

1FT6 motors, core type

Natural cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Natural cooling	Num-ber of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No. Core type		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² / lb _f -in-s ²	kg/lb
2000	100	4.8/6.44	27/19.9	23/17	11	1FT6102-1AC71- ■ ■ ■ 1	4	99/0.0876	27.5/60.6
		8.0/10.73	50/36.9	38/28	17.6	1FT6105-1AC71- ■ ■ ■ 1	4	168/0.1487	39.5/87.1
3000	48	1.4/1.88	5/3.7	4.3/3.2	2.9	1FT6044-1AF71- ■ ■ ■ 1	2	5 1/0.0045	8.3/18.3
		1.5/2.01	6/4.4	4.7/3.5	3.4	1FT6062-1AF71- ■ ■ ■ 1	3	8.5/0.0752	9.5/20.9
	63	2.2/2.95	9.5/7	7/5.2	4.9	1FT6064-1AF71- ■ ■ ■ 1	3	13/0.0115	12.5/27.6
		3.2/4.29	13/9.6	10.3/7.6	8.7	1FT6082-1AF71- ■ ■ ■ 1	4	30/0.0266	15/33.1
		4.6/6.17	20/14.7	14.7/10.8	11	1FT6084-1AF71- ■ ■ ■ 1	4	48/0.0425	20.5/45.2
		5.8/7.78	27/19.9	18.5/13.6	13	1FT6086-1AF71- ■ ■ ■ 1	4	66.5/0.0589	25.5/56.2
4500	63	1.7/2.28	6/4.4	3.6/2.7	3.9	1FT6062-1AH71- ■ ■ ■ 1	3	8.5/0.0752	9.5/20.9
		2.3/3.08	9.5/7	4.8/3.5	5.5	1FT6064-1AH71- ■ ■ ■ 1	3	13/0.0115	12.5/27.6
	80	4.9/6.57	20/14.7	10.5/7.7	12.5	1FT6084-1AH71- ■ ■ ■ 1	4	48/0.0425	20.5/45.2
		5.7/7.64	27/19.9	12/8.8	12.6	1FT6086-1AH71- ■ ■ ■ 1	4	66.5/0.0589	25.5/56.2
6000	36	0.88/1.0	2/1.5	1.4/1	2.1	1FT6034-1AK71- ■ ■ ■ 1	2	1.1/0.001	4.4/9.7
	80	4.1/5.5	20/14.7	6.5/4.8	9.2	1FT6084-1AK71- ■ ■ ■ 1	4	48/0.0425	20.5/45.2
Type:				IM B5		1			
Connector outlet direction:				Transverse right (not for 1FT603/1FT604/1FT606) Transverse left (not for 1FT603/1FT604/1FT606) Axial non-drive end (NDE) Axial drive end (DE)		1			
						2			
						3			
						4			
Encoder systems for motors without DRIVE-CLiQ interface:				Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾		A			
						E			
Encoder systems for motors with DRIVE-CLiQ interface:				Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾		D			
						F			
Plain shaft/radial eccentricity tolerance N:				Without holding brake With holding brake		G			
						H			

Selection and ordering data

Motor type (continued)	Static current	Calculated power $P_{\text{calc}} = M_0 \times \frac{n_{\text{rated}}}{9550}$	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector			
	I_0 at M_0 $\Delta T=100\text{ K}$	P_{calc} for M_0 $\Delta T=100\text{ K}$	Rated output current I_{rated}	Order No. For complete order no., see "SINAMICS S120"	Power con- nector	Motor cable cross section ²⁾	Order no. Pre-assembled cable	
	A	kW/HP	A		Size	mm ²		
1FT6102-1AC7...	12.1	5.7/7.6	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 1.5	6FX■002-5■ S21-....	
1FT6105-1AC7...	21.4	10.5/14.8	30	6SL312■ - 1 TE23-0AA.	1.5	4 x 4	6FX■002-5■ S41-....	
1FT6044-1AF7...	3	1.6/2.2	3	6SL312■ - ■ TE13-0AA.	1	4 x 1.5	6FX■002-5■ S01-....	
1FT6062-1AF7...	4.1	1.9/2.6	5	6SL312■ - ■ TE15-0AA.	1	4 x 1.5	6FX■002-5■ S01-....	
1FT6064-1AF7...	6.1	3.0/4.0	9	6SL312■ - ■ TE21-0AA.	1	4 x 1.5	6FX■002-5■ S01-....	
1FT6082-1AF7...	9.6	4.1/5.5	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 1.5	6FX■002-5■ S21-....	
1FT6084-1AF7...	13.2	6.3/8.5	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 1.5	6FX■002-5■ S21-....	
1FT6086-1AF7...	16.4	8.5/11.4	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 2.5	6FX■002-5■ S31-....	
1FT6062-1AH7...	5.7	2.8/3.8	9	6SL312■ - ■ TE21-0AA.	1	4 x 1.5	6FX■002-5■ S01-....	
1FT6064-1AH7...	9.0	4.5/6.0	9	6SL312■ - ■ TE21-0AA.	1	4 x 1.5	6FX■002-5■ S01-....	
1FT6084-1AH7...	19.8	9.4/12.6	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 4	6FX■002-5■ S41-....	
1FT6086-1AH7...	23.3	12.7/17.0	30	6SL312■ - 1 TE23-0AA.	1.5	4 x 4	6FX■002-5■ S41-....	
1FT6034-1AK7...	2.6	1.3/1.7	3	6SL312■ - ■ TE13-0AA.	1	4 x 1.5	6FX■002-5■ S01-....	
1FT6084-1AK7...	24.1	12.6/16.9	30	6SL312■ - 1 TE23-0AA.	1.5	4 x 4	6FX■002-5■ S41-....	
Cooling:				0 1				
Internal air cooling								
External air cooling								
Motor Module:				1 2				
Single Motor Module								
Double Motor Module								
Power cable model:						8 5		
MOTION-CONNECT 800								
MOTION-CONNECT 500								
Without brake cores							C D	
With brake cores								
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".								

1) If the absolute encoder is used, M_{rated} is reduced by 10%.

2) The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operating conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors
Synchronous motors

1FT6 motors, standard type
Natural cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Natural cooling	Num-ber of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100$ K	M_0 at $\Delta T=100$ K	M_{rated} at $\Delta T=100$ K	I_{rated} at $\Delta T=100$ K	Order No. Standard type		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² / lb _f -in-s ²	kg/lb
1500	100	3.8/5.1	27/19.9	24.5/18.1	8.4	1FT6102-8AB7 ■ - ■ ■ ■ ■ ■	4	99/0.0876	27.5/60.6
		6.4/8.6	50/36.9	41/30.2	14.5	1FT6105-8AB7 ■ - ■ ■ ■ ■ ■	4	168/0.1487	39.5/87.1
		9.6/12.9	70/51.6	61/45	20.5	1FT6108-8AB7 ■ - ■ ■ ■ ■ ■	4	260/0.2301	55.5/122.4
	132	9.7/13.0	75/55.3	62/45.7	19	1FT6132-6AB7 1 - ■ ■ ■ ■ ■	3	430/0.3806	85/187.4
		11.8/15.8	95/70	75/55.3	24	1FT6134-6AB7 1 - ■ ■ ■ ■ ■	3	547/0.4841	100/220.5
		13.8/18.5	115/84.8	88/64.9	27	1FT6136-6AB7 1 - ■ ■ ■ ■ ■	3	664/0.5876	117/258
Type:			IM B5 IM B14 ²⁾ (not for 1FT613)			1 2			
Connector outlet direction:			Transverse right Transverse left Axial NDE (not for 1FT613) Axial drive end (DE)			1 2 3 4			
Terminal box/ cable entry:			Transverse/from right Transverse/from left axial/from NDE axial/from DE			5 6 7 8			
Encoder systems for motors without DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			A E S T			
Encoder systems for motors with DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			D F U P			
Shaft extension:			Radial eccentricity tolerance:		Holding brake:				
Fitted key and keyway			N		without				A
Fitted key and keyway			N		with				B
Fitted key and keyway			R		without				D
Fitted key and keyway			R		with				E
Plain shaft			N		without				G
Plain shaft			N		with				H
Plain shaft			R		without				K
Plain shaft			R		with				L
Vibration severity grade:			Degree of protection:						
N			IP64						0
N			IP65						1
N			IP67						2
N			IP68						6
R			IP64						3
R			IP65						4
R			IP67						5
R			IP68						7

To select the degree of protection and type, see "Selection guide".

Selection and ordering data

Motor type (continued)	Static current	Calculated power $P_{\text{calc}} = M_0 \times n_{\text{rated}}/9550$	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
	I_0 at M_0 $\Delta T=100\text{ K}$	P_{calc} for M_0 $\Delta T=100\text{ K}$	Rated output current I_{rated}	Order No. For complete order no., see "SINAMICS S120"	Power con- nector	Motor cable cross section ³⁾	Order no. Pre-assembled cable
	A	kW/HP	A		Size	mm ²	
1FT6102-8AB7...	8.7	4.2/5.6	9	6SL312■ - ■TE21-0AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6105-8AB7...	16.0	7.9/10.6	18	6SL312■ - ■TE21-8AA.	1.5	4 x 2.5	6FX■002-5■S31-....
1FT6108-8AB7...	22.3	11.0/14.8	30	6SL312■ - 1TE23-0AA.	1.5	4 x 4	6FX■002-5■S41-....
1FT6132-6AB7 ...	21.6	11.8/15.8	30	6SL312■ - 1TE23-0AA.	1.5	4 x 4	6FX■002-5■S41-....
1FT6134-6AB7 ...	27.0	14.9/20.0	30	6SL312■ - 1TE23-0AA.	1.5	4 x 4	6FX■002-5■S41-....
1FT6136-6AB7...	34	18.1/24.3	45	6SL312■ - 1TE24-5AA.	1.5	4 x 10	6FX■002-5■S64-....
Cooling:				0 1			
Internal air cooling							
External air cooling							
Motor Module:				1 2			
Single Motor Module							
Double Motor Module							
Power cable model:						8 5	
MOTION-CONNECT 800							
MOTION-CONNECT 500							
Without brake cores							C D
With brake cores							
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

- 1) If the absolute encoder is used, M_{rated} is reduced by 10%.
- 2) Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.
- 3) The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors
Synchronous motors

1FT6 motors, standard type
Natural cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Natural cooling	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No. Standard type		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² /lb _f -in-s ²	kg/lb
2000	63	0.8/1.1	4/2.9	3.7/2.7	1.9	1FT6061-6AC7■-■■■■■	3	6/0.0053	8/17.6
		1.1/1.5	6/4.4	5.2/3.8	2.6	1FT6062-6AC7■-■■■■■	3	8.5/0.0075	9.5/20.9
		1.7/2.3	9.5/7	8/5.9	3.8	1FT6064-6AC7■-■■■■■	3	13/0.0115	12.5/27.6
	80	1.6/2.2	8/5.9	7.5/5.5	4.1	1FT6081-8AC7■-■■■■■	4	21/0.0186	12.5/27.6
		2.4/3.2	13/9.6	11.4/8.4	6.6	1FT6082-8AC7■-■■■■■	4	30/0.0266	15/33.1
		3.5/4.7	20/14.7	16.9/12.5	8.3	1FT6084-8AC7■-■■■■■	4	48/0.0425	20.5/45.2
		4.7/6.3	27/19.9	22.5/16.6	10.9	1FT6086-8AC7■-■■■■■	4	66.5/0.0589	25.5/56.2
	100	4.8/6.4	27/19.9	23/17	11	1FT6102-8AC7■-■■■■■	4	99/0.0876	27.5/60.6
		8.0/10.7	50/36.9	38/28	17.6	1FT6105-8AC7■-■■■■■	4	168/0.1478	39.5/87.1
		11.5/15.4	70/51.6	55/40.5	24.5	1FT6108-8AC7■-■■■■■	4	260/0.2301	55.5/122.4
	132	11.5/15.4	75/55.3	55/40.5	23	1FT6132-6AC7 1-■■■■■	3	430/0.3806	85/187.5
		13.6/18.2	95/70	65/47.9	27	1FT6134-6AC7 1-■■■■■	3	547/0.4841	100/220.5
		15.5/20.8	115/84.8	74/54.5	30	1FT6136-6AC7 1-■■■■■	3	664/0.5876	117/258
Type:		IM B5 IM B14 ²⁾ (not for 1FT613)				1			
						2			
Connector outlet direction:		Transverse right (not for 1FT606) Transverse left (not for 1FT606) Axial NDE (not for 1FT613) Axial drive end (DE)				1			
						2			
						3			
						4			
Terminal box/ cable entry: (only for 1FT61)		Transverse/from right Transverse/from left axial/from NDE axial/from DE				5			
						6			
						7			
						8			
Encoder systems for motors without DRIVE-CLiQ interface:		Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver				A			
						E			
						S			
						T			
Encoder systems for motors with DRIVE-CLiQ interface:		Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver				D			
						F			
						U			
						P			
Shaft extension:		Radial eccentricity tolerance:		Holding brake:					
Fitted key and keyway		N		without					
Fitted key and keyway		N		with					
Fitted key and keyway		R		without					
Fitted key and keyway		R		with					
Plain shaft		N		without					
Plain shaft		N		with					
Plain shaft		R		without					
Plain shaft		R		with					
Vibration severity grade:		Degree of protection:							
N		IP64							
N		IP65							
N		IP67							
N		IP68							
R		IP64							
R		IP65							
R		IP67							
R		IP68							

To select the degree of protection and type, see "Selection guide".

Selection and ordering data

Motor type (continued)	Static current	Calculated power $P_{calc} = M_0 \times \frac{n_{rated}}{9550}$	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
	I_0 at M_0 $\Delta T=100\text{ K}$	P_{calc} for M_0 $\Delta T=100\text{ K}$	Rated output current	Order No. For complete order no., see "SINAMICS S120"	Power con- nector	Motor cable cross section 3)	Order no. Pre-assembled cable
	A	kW/HP	A		Size	mm ²	
1FT6061-6AC7...	1.9	0.84/1.1	3	6SL312■ - ■ TE13-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6062-6AC7...	2.7	1.3/1.7	3	6SL312■ - ■ TE13-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6064-6AC7...	4.2	2.0/2.7	5	6SL312■ - ■ TE15-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6081-8AC7...	3.9	1.7/2.3	5	6SL312■ - ■ TE15-0AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6082-8AC7...	6.6	2.7/3.6	9	6SL312■ - ■ TE21-0AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6084-8AC7...	8.8	4.2/5.6	9	6SL312■ - ■ TE21-0AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6086-8AC7...	11.3	5.7/7.6	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6102-8AC7...	12.1	5.7/7.6	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6105-8AC7...	21.4	10.5/14.8	30	6SL312■ - 1 TE23-0AA.	1.5	4 x 4	6FX■002-5■S41-....
1FT6108-8AC7...	29	14.7/19.7	30	6SL312■ - 1 TE23-0AA.	1.5	4 x 6	6FX■002-5■S51-....
1FT6132-6AC7...	29	15.7/21.1	30	6SL312■ - 1 TE23-0AA.	1.5	4 x 6	6FX■002-5■S51-....
1FT6134-6AC7...	36	19.9/26.7	45	6SL312■ - 1 TE24-5AA.	1.5	4 x 10	6FX■002-5■S64-....
1FT6136-6AC7...	42	24.1/32.3	45	6SL312■ - 1 TE24-5AA.	3	4 x 16	6FX■002-5■S23-....
Cooling:				0 1			
Internal air cooling							
External air cooling							
Motor Module:				1 2			
Single Motor Module							
Double Motor Module							
Power cable model:						8 5	
MOTION-CONNECT 800							
MOTION-CONNECT 500							
Without brake cores				C D			
With brake cores							
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

- 1) If the absolute encoder is used, M_{rated} is reduced by 10%.
- 2) Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.
- 3) The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

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Synchronous motors

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Natural cooling

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Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Natural cooling	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No. Standard type		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² / lb _f -in-s ²	kg/lb
3000	48	0.7/0.9	2.6/1.9	2.15/1.6	1.7	1FT6041-4AF71 - ■■■■	2	2.9/0.0025	6.6/14.6
		1.4/1.9	5/3.7	4.3/3.2	2.9	1FT6044-4AF71 - ■■■■	2	5.1/0.0045	8.3/18.3
	63	1.1/1.5	4/2.9	3.5/2.6	2.6	1FT6061-6AF7■ - ■■■■	3	6/0.0053	8/17.6
		1.5/2.0	6/4.4	4.7/3.5	3.4	1FT6062-6AF7■ - ■■■■	3	8.5/0.0075	9.5/20.9
		2.2/3.0	9.5/7	7/5.2	4.9	1FT6064-6AF7■ - ■■■■	3	13/0.0115	12.5/27.6
	80	2.2/3.0	8/5.9	6.9/5.1	5.6	1FT6081-8AF7■ - ■■■■	4	21/0.0186	12.5/27.6
		3.2/4.3	13/9.6	10.3/7.6	8.7	1FT6082-8AF7■ - ■■■■	4	30/0.0266	15/33.1
		4.6/6.2	20/14.7	14.7/10.8	11	1FT6084-8AF7■ - ■■■■	4	48/0.0425	20.5/45.2
		5.8/7.8	27/19.9	18.5/13.6	13	1FT6086-8AF7■ - ■■■■	4	66.5/0.0589	25.5/56.2
	100	6.1/8.2	27/19.9	19.5/14.4	13.2	1FT6102-8AF7■ - ■■■■	4	99/0.0876	27.5/60.6
		9.7/13.0	50/36.9	31/22.8	22.5	1FT6105-8AF7■ - ■■■■	4	168/0.1487	39.5/87.1
		11.6/15.6	70/51.6	37/27.3	25	1FT6108-8AF7■ - ■■■■	4	260/0.2301	55.5/122.4
	132	11.3/15.2	75/55.3	36/26.5	23	1FT6132-6AF71 - ■■■■	3	430/0.3806	85/187.4
Type:		IM B5 IM B14 ²⁾ (not for 1FT604/1FT613)				1 2			
Connector outlet direction:		Transverse right (not for 1FT604/1FT606) Transverse left (not for 1FT604/1FT606) Axial NDE (not for 1FT613) Axial drive end (DE)				1 2 3 4			
Terminal box/ cable entry: (only for 1FT61)		Transverse/from right Transverse/from left axial/from NDE axial/from DE				5 6 7 8			
Encoder systems for motors without DRIVE-CLiQ interface:		Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver				A E S T			
Encoder systems for motors with DRIVE-CLiQ interface:		Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver				D F U P			
Shaft extension:		Radial eccentricity tolerance:		Holding brake:		A B D E G H K L			
Fitted key and keyway		N		without					
Fitted key and keyway		N		with					
Fitted key and keyway		R		without					
Fitted key and keyway		R		with					
Plain shaft		N		without					
Plain shaft		N		with					
Plain shaft		R		without					
Plain shaft		R		with					
Vibration severity grade:		Degree of protection:				0 1 2 6 3 4 5 7			
N		IP64							
N		IP65							
N		IP67							
N		IP68							
R		IP64							
R		IP65							
R		IP67							
R		IP68							

To select the degree of protection and type, see "Selection guide".

Selection and ordering data

Motor type (continued)	Static current	Calculated power $P_{calc} = M_0 \times$ $n_{rated}/9550$	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
	I_0 at M_0 $\Delta T=100$ K	P_{calc} for M_0 $\Delta T=100$ K	Rated output current I_{rated}	Order No. For complete order no., see "SINAMICS S120"	Power con- nector	Motor cable cross section 4)	Order no. Pre-assembled cable
	A	kW/HP	A		Size	mm ²	
1FT6041-4AF7 ...	1.9	0.8/1.1	3	6SL312■ - ■ TE13-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6044-4AF7 ...	3	1.6/2.2	3	6SL312■ - ■ TE13-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6061-6AF7 ...	2.7	1.3/1.7	3	6SL312■ - ■ TE13-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6062-6AF7 ...	4.1	1.9/2.6	5	6SL312■ - ■ TE15-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6064-6AF7 ...	6.1	3.0/4.0	9	6SL312■ - ■ TE21-0AA.	1	4 x 1.5	6FX■002-5■S01-....
1FT6081-8AF7 ...	5.8	2.5/3.4	9	6SL312■ - ■ TE21-0AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6082-8AF7 ...	9.6	4.1/5.5	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6084-8AF7 ...	13.2	6.3/8.5	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 1.5	6FX■002-5■S21-....
1FT6086-8AF7 ...	16.4	8.5/11.4	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 2.5	6FX■002-5■S31-....
1FT6102-8AF7 ...	16.9	8.5/11.4	18	6SL312■ - ■ TE21-8AA.	1.5	4 x 2.5	6FX■002-5■S31-....
1FT6105-8AF7 ...	32	15.7/21.1	30 ³⁾	6SL312■ - 1 TE23-0AA.	1.5	4 x 6	6FX■002-5■S51-....
1FT6108-8AF7 ...	41	22.0/29.5	45	6SL312■ - 1 TE24-5AA.	3	4 x 16	6FX■002-5■S23-....
1FT6132-6AF7 ...	43	23.6/31.7	45	6SL312■ - 1 TE24-5AA.	3	4 x 16	6FX■002-5■S23-....
Cooling:				0 1			
Internal air cooling							
External air cooling							
Motor Module:				1 2			
Single Motor Module							
Double Motor Module							
Power cable model:						8 5	C D
MOTION-CONNECT 800							
MOTION-CONNECT 500							
Without brake cores							
With brake cores							
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

- 1) If the absolute encoder is used, M_{rated} is reduced by 10%.
- 2) Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.
- 3) With the specified Motor Module, the motor cannot be fully utilized with M_0 at $\Delta T = 100$ K winding temperature rise. If a Motor Module with a higher rating is used, you must check whether the specified power cable can be connected to it.

- 4) The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors
Synchronous motors

1FT6 motors, standard type
Natural cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Natural cooling	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)	
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No. Standard type		J	m	
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² / lb _f -in-s ²	kg/lb	
4500	63	1.4/1.9	4/2.9	2.9/2.1	3.4	1FT6061-6AH7■ - ■ ■ ■ ■ ■	3	6/0.0053	8/17.6	
		1.7/2.3	6/4.4	3.6/2.7	3.9	1FT6062-6AH7■ - ■ ■ ■ ■ ■	3	8.5/0.0075	9.5/20.9	
		2.3/3.1	9.5/7	4.8/3.5	5.5	1FT6064-6AH7■ - ■ ■ ■ ■ ■	3	13/0.0115	12.5/27.6	
	80	2.7/3.6	8/5.9	5.8/4.3	7.3	1FT6081-8AH7■ - ■ ■ ■ ■ ■	4	21/0.0186	12.5/27.6	
		4/5.4	13/9.6	8.5/6.3	11	1FT6082-8AH7■ - ■ ■ ■ ■ ■	4	30/0.0266	15/33.1	
		4.9/6.6	20/14.7	10.5/7.7	12.5	1FT6084-8AH7■ - ■ ■ ■ ■ ■	4	48/0.0425	20.5/45.2	
		5.7/7.6	27/19.9	12/8.8	12.6	1FT6086-8AH7■ - ■ ■ ■ ■ ■	4	66.5/0.0589	25.5/56.2	
	100	5.7/7.6	27/19.9	12/8.8	12	1FT6102-8AH7■ - ■ ■ ■ ■ ■	4	99/0.0876	27.5/60.6	
		Type:								
		IM B5 IM B14 ²⁾					1 2			
Connector outlet direction:			Transverse right (<u>not</u> for 1FT606) Transverse left (<u>not</u> for 1FT606) Axial NDE Axial DE			1 2 3 4				
Terminal box/ cable entry: (<u>only</u> for 1FT61)			Transverse/from right Transverse/from left axial/from NDE axial/from DE			5 6 7 8				
Encoder systems for motors without DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			A E S T				
Encoder systems for motors with DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			D F U P				
Shaft extension:			Radial eccentricity tolerance:		Holding brake:					
Fitted key and keyway			N		without	A B D E G H K L				
Fitted key and keyway			N		with					
Fitted key and keyway			R		without					
Fitted key and keyway			R		with					
Plain shaft			N		without	G H K L				
Plain shaft			N		with					
Plain shaft			R		without					
Plain shaft			R		with					
Vibration severity grade:			Degree of protection:							
N			IP64			0 1 2 6				
N			IP65							
N			IP67							
N			IP68							
R			IP64			3 4 5 7				
R			IP65							
R			IP67							
R			IP68							

To select the degree of protection and type, see "Selection guide".

Selection and ordering data

Motor type (continued)	Static current	Calculated power $P_{\text{calc}} = M_0 \times \frac{n_{\text{rated}}}{9550}$	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
	I_0 at M_0 $\Delta T = 100 \text{ K}$	P_{calc} for M_0 $\Delta T = 100 \text{ K}$	Rated output current I_{rated}	Order No. For complete order no., see "SINAMICS S120"	Power con- nector	Motor cable cross section ⁴⁾	Order no. Pre-assembled cable
	A	kW/HP	A		Size	mm ²	
1FT6061-6AH7...	4	1.9/2.6	5	6SL312-1-TE15-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6062-6AH7...	5.7	2.8/3.8	9	6SL312-1-TE21-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6064-6AH7...	9.0	4.5/6.0	9	6SL312-1-TE21-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6081-8AH7...	8.6	3.8/5.1	9	6SL312-1-TE21-0AA.	1.5	4 x 1.5	6FX002-5S21-....
1FT6082-8AH7...	14.8	6.1/8.2	18	6SL312-1-TE21-8AA.	1.5	4 x 1.5	6FX002-5S21-....
1FT6084-8AH7...	19.8	9.4/12.6	18 ³⁾	6SL312-1-TE21-8AA.	1.5	4 x 4	6FX002-5S41-....
1FT6086-8AH7...	23.3	12.7/17.0	30	6SL312-1-TE23-0AA.	1.5	4 x 4	6FX002-5S41-....
1FT6102-8AH7...	24.1	12.7/17.0	30	6SL312-1-TE23-0AA.	1.5	4 x 4	6FX002-5S41-....
Cooling:							
Internal air cooling				0			
External air cooling				1			
Motor Module:							
Single Motor Module				1			
Double Motor Module				2			
Power cable model:							
MOTION-CONNECT 800						8	
MOTION-CONNECT 500						5	
Without brake cores							C
With brake cores							D
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

- ¹⁾ If the absolute encoder is used, M_{rated} is reduced by 10%.
- ²⁾ Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.
- ³⁾ With the specified Motor Module, the motor cannot be fully utilized with M_0 at $\Delta T = 100 \text{ K}$ winding temperature rise.

- ⁴⁾ The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors
Synchronous motors

1FT6 motors, standard type
Natural cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Natural cooling	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No. Standard type		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² /lb _f -in-s ²	kg/lb
6000	28	0.19/0.3	0.4/0.3	0.3/0.2	1.1	1FT6021-6AK71 - ■ ■ ■ ■ ■	3	0.21/0.0002	1.2/2.6
		0.31/0.4	0.8/0.6	0.5/0.4	0.9	1FT6024-6AK71 - ■ ■ ■ ■ ■	3	0.34/0.0003	2.1/4.6
	36	0.47/0.6	1/0.7	0.75/0.6	1.2	1FT6031-4AK71 - ■ ■ ■ ■ ■	2	0.65/0.0006	3.1/6.8
		0.88/1.2	2/1.5	1.4/1	2.1	1FT6034-4AK71 - ■ ■ ■ ■ ■	2	1.1/0.0010	4.4/9.7
	48	1.1/1.5	2.6/1.9	1.7/1.3	2.4	1FT6041-4AK71 - ■ ■ ■ ■ ■	2	2.9/0.0025	6.6/14.6
		1.9/2.6	5/3.7	3/2.2	4.1	1FT6044-4AK71 - ■ ■ ■ ■ ■	2	5.1/0.0045	8.3/18.3
	63	1.3/1.7	4/2.9	2.1/1.5	3.1	1FT6061-6AK71 ■ - ■ ■ ■ ■ ■	3	6/0.0053	8/17.6
		1.3/1.7	6/4.4	2.1/1.5	3.2	1FT6062-6AK71 ■ - ■ ■ ■ ■ ■	3	8.5/0.0075	9.5/20.9
		1.3/1.7	9.5/7	2.1/1.5	3.5	1FT6064-6AK71 ■ - ■ ■ ■ ■ ■	3	13/0.0115	12.5/27.6
	80	2.9/4	8/5.9	4.6/3.4	7.7	1FT6081-8AK71 ■ - ■ ■ ■ ■ ■	4	21/0.0186	12.5/27.6
		3.5/4.7	13/9.6	5.5/4.1	9.1	1FT6082-8AK71 ■ - ■ ■ ■ ■ ■	4	30/0.0266	15/33.1
		4.1/5.5	20/14.7	6.5/4.8	9.2	1FT6084-8AK71 ■ - ■ ■ ■ ■ ■	4	48/0.0425	20.5/45.2
Type:			IM B5 IM B14 ²⁾ (not for 1FT602/1FT603/1FT604)			1			
						2			
Connector outlet direction:			Transverse right (not for 1FT603/1FT604/1FT606) Transverse left (not for 1FT603/1FT604/1FT606) Axial NDE Axial DE			1			
						2			
						3			
						4			
Encoder systems for motors without DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ (not for 1FT602) Absolute encoder EnDat 512 pulses/revolution ¹⁾ (only for 1FT602) Multi-pole resolver 2-pole resolver			A			
						E			
						H			
						S			
						T			
Encoder systems for motors with DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ (not for 1FT602) Absolute encoder EnDat 512 pulses/revolution ¹⁾ (only for 1FT602) Multi-pole resolver 2-pole resolver			D			
						F			
						L			
						U			
						P			
Shaft extension:			Radial eccentricity tolerance:		Holding brake:	A			
Fitted key and keyway			N		without	B			
Fitted key and keyway			N		with				
Fitted key and keyway			R		without	D			
Fitted key and keyway			R		with	E			
Plain shaft			N		without	G			
Plain shaft			N		with	H			
Plain shaft			R		without	K			
Plain shaft			R		with	L			
Vibration severity grade:			Degree of protection:						
N			IP64			0			
N			IP65 (not for 1FT602)			1			
N			IP67			2			
N			IP68 (not for 1FT602)			6			
R			IP64			3			
R			IP65 (not for 1FT602)			4			
R			IP67			5			
R			IP68 (not for 1FT602)			7			

To select the degree of protection and type, see "Selection guide".

Selection and ordering data

Motor type (continued)	Static current I_0 at M_0 $\Delta T=100\text{ K}$ A	Calculated power $P_{\text{calc}} = M_0 \times$ $n_{\text{rated}}/9550$ P_{calc} for M_0 $\Delta T=100\text{ K}$ kW/HP	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
			Rated output current I_{rated} A	Order No. For complete order no., see "SINAMICS S120"	Power con- nector Size	Motor cable cross section 3) mm ²	Order no. Pre-assembled cable
1FT6021-6AK7 ...	1.25	0.3/0.4	3	6SL312- - TE13-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6024-6AK7 ...	1.25	0.5/0.7	3	6SL312- - TE13-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6031-4AK7 ...	1.4	0.6/0.8	3	6SL312- - TE13-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6034-4AK7 ...	2.6	1.3/1.7	3	6SL312- - TE13-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6041-4AK7 ...	3	1.6/2.2	3	6SL312- - TE13-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6044-4AK7 ...	5.9	3.1/4.2	9	6SL312- - TE21-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6061-6AK7...	5	2.5/3.4	5	6SL312- - TE15-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6062-6AK7...	7.6	3.8/5.1	9	6SL312- - TE21-0AA.	1	4 x 1.5	6FX002-5S01-....
1FT6064-6AK7...	12	4.0/5.4	18	6SL312- - TE21-8AA.	1	4 x 1.5	6FX002-5S01-....
1FT6081-8AK7...	11.1	5.0/6.7	18	6SL312- - TE21-8AA.	1.5	4 x 1.5	6FX002-5S21-....
1FT6082-8AK7...	17.3	8.2/11	18	6SL312- - TE21-8AA.	1.5	4 x 2.5	6FX002-5S31-....
1FT6084-8AK7...	24.1	12.6/16.9	30	6SL312- - 1TE23-0AA.	1.5	4 x 4	6FX002-5S41-....
Cooling: Internal air cooling External air cooling				0 1			
Motor Module: Single Motor Module Double Motor Module				1 2			
Power cable model: MOTION-CONNECT 800 MOTION-CONNECT 500						8 5	
Without brake cores With brake cores							C D
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

- 1) If the absolute encoder is used, M_{rated} is reduced by 10%.
- 2) Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.
- 3) The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors
Synchronous motors

1FT6 motors, standard type
Forced ventilation

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Forced ventilation ²⁾	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No. Standard type		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² /lb _f -in-s ²	kg/lb
1500	100	9.3/12.5	65/47.9	59/43.5	21.7	1FT6105-8SB7■ - ■■■■	4	168/0.1487	45.5/100.3
		13/17.4	90/66.3	83/61.2	31	1FT6108-8SB7■ - ■■■■	4	260/0.2301	61.5/135.6
	132	16/21.5	110/81.1	102/75.5	36	1FT6132-6SB71 - ■■■■	3	430/0.3806	91/200.6
		20.4/27.4	140/103.2	130/95.8	45	1FT6134-6SB71 - ■■■■	3	547/0.4810	106/233.7
		25.1/33.7	175/129	160/117.9	55	1FT6136-6SB71 - ■■■■	3	664/0.5876	123/271.2
2000	100	11.7/15.7	65/47.9	56/41.3	28	1FT6105-8SC7■ - ■■■■	4	168/0.1487	45.5/100.3
		16.8/22.5	90/66.3	80/59	40	1FT6108-8SC7■ - ■■■■	4	260/0.2301	61.5/135.6
	132	20.5/27.5	110/81.1	98/72.2	46	1FT6132-6SC71 - ■■■■	3	430/0.3806	91/200.6
		26.2/35.1	140/103.2	125/92.1	57	1FT6134-6SC71 - ■■■■	3	547/0.4810	106/233.7
		32.5/43.6	175/129	155/114.2	72	1FT6136-6SC71 - ■■■■	3	664/0.5876	123/271.2
Type:			IM B5 IM B14 ³⁾ (not for 1FT613.)			1 2			
Connector outlet direction:			Transverse right Transverse left Axial NDE (not for 1FT613.) Axial drive end (DE)			1 2 3 4			
Terminal box/ cable entry:			Transverse/from right Transverse/from left axial/from NDE axial/from DE			5 6 7 8			
Encoder systems for motors without DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			A E S T			
Encoder systems for motors with DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			D F U P			
Shaft extension:			Radial eccentricity tolerance:		Holding brake:		A B D E G H K L		
Fitted key and keyway			N		without				
Fitted key and keyway			N		with				
Fitted key and keyway			R		without				
Fitted key and keyway			R		with				
Plain shaft			N		without				
Plain shaft			N		with				
Plain shaft			R		without				
Plain shaft			R		with				
Vibration severity grade:			Degree of protection: ⁴⁾					0 1 3 4	
N			IP64						
N			IP65						
R			IP64						
R			IP65						

To select the degree of protection and type, see "Selection guide".

Selection and ordering data

Motor type (continued)	Static current	Calculated power $P_{\text{calc}} = M_0 \times \frac{n_{\text{rated}}}{9550}$	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
	I_0 at M_0 $\Delta T = 100 \text{ K}$ A	P_{calc} for M_0 $\Delta T = 100 \text{ K}$ kW/HP	Rated output current I_{rated} A	Order No. For complete order no., see "SINAMICS S120"	Power connector Size	Motor cable cross section ⁵⁾ mm ²	Order no. Pre-assembled cable
1FT6105-8SB7...	21.9	10.2/13.7	30	6SL312-1TE23-0AA.	1.5	4 x 4	6FX002-5S41-....
1FT6108-8SB7...	30	14.1/18.9	30	6SL312-1TE23-0AA.	1.5	4 x 6	6FX002-5S51-....
1FT6132-6SB7...	36	17.3/23.2	45	6SL312-1TE24-5AA.	3	4 x 16	6FX002-5S23-....
1FT6134-6SB7...	44	22.0/29.5	60	6SL312-1TE26-0AA.	3	4 x 16	6FX002-5S23-....
1FT6136-6SB7...	55	27.5/36.9	60	6SL312-1TE26-0AA.	3	4 x 16	6FX002-5S23-....
1FT6105-8SC7...	30	13.6/18.2	30	6SL312-1TE23-0AA.	1.5	4 x 6	6FX002-5S51-....
1FT6108-8SC7...	41	18.8/25.2	45	6SL312-1TE24-5AA.	3	4 x 16	6FX002-5S23-....
1FT6132-6SC7...	47	23.0/30.8	60	6SL312-1TE26-0AA.	3	4 x 16	6FX002-5S23-....
1FT6134-6SC7...	58	29.3/39.3	60	6SL312-1TE26-0AA.	3	4 x 16	6FX002-5S23-....
1FT6136-6SC7...	77	36.6/49.1	85	6SL312-1TE28-5AA.	3	4 x 25	6FX002-5DS33-....
Cooling: Internal air cooling External air cooling				0 1			
Motor Module: Single Motor Module				1			
Power cable model: MOTION-CONNECT 800 MOTION-CONNECT 500						8 5	
Without brake cores With brake cores							C D
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

Notes on forced ventilation

	Shaft heights 80 and 100	Shaft height 132
Direction of air flow	From NDE to DE	From DE to NDE
Connection system	Connector size 1	Terminal box
Type of connecting cable	6FX.002-5CA01-....	6FX.008-1BB11-
Pin and terminal assignments	Pin 1: L1, Pin 2: N	U1/L1: V2/L2: W3/L3
Supply voltage	220/260 V 1 AC, 50/60 Hz	400/460 V 3 AC, 50/60 Hz
Max. fan current	0.3 A	0.4 A
Weight of the fan module, approx.	4.8 kg (10.6 lb)	5.6 kg (12.3 lb)
Sound pressure level	70 dB (A)	74 dB (A)

- 1) If the absolute encoder is used, M_{rated} is reduced by 10%.
- 2) Not for use in environments containing electrically conductive dust. Forced ventilation cannot be used in the presence of flammable, corrosive, electrically conductive or explosive dust.
- 3) Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.

- 4) The degree of protection refers to the motor. The built-on fan meets the requirements of degree of protection IP54.
- 5) The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors
Synchronous motors

1FT6 motors, standard type
Forced ventilation

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque ¹⁾	Rated current	1FT6 synchronous motors Forced ventilation ²⁾	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)		
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No. Standard type		J	m		
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² / lb _f -in-s ²	kg/lb		
3000	80	6.9/9.3	26/19.2	22/16.2	17	1FT6084-8SF7■ - ■■■■	4	48/0.0425	25/55.1		
		9.7/13.0	35/25.8	31/22.8	24.5	1FT6086-8SF7■ - ■■■■	4	66.5/0.0589	30/66.2		
	100	15.7/21.1	65/47.9	50/36.9	35	1FT6105-8SF7■ - ■■■■	4	168/0.1487	45.5/100.3		
		22/29.5	90/66.3	70/51.6	53	1FT6108-8SF7■ - ■■■■	4	260/0.2301	61.5/135.6		
	132	28.3/38.0	110/81.1	90/66.3	62	1FT6132-6SF71 - ■■■■	3	430/0.3806	91/200.6		
		34.6/46.4	140/103.2	110/81.1	72	1FT6134-6SF71 - ■■■■	3	547/0.4810	106/233.7		
45.5/61.0		175/129	145/106.9	104	1FT6136-6SF71 - ■■■■	3	664/0.5878	123/271.2			
4500	80	9.4/12.6	26/19.2	20/14.7	24.5	1FT6084-8SH7■ - ■■■■	4	48/0.0425	25/55.1		
		12.7/17.0	35/25.8	27/19.9	31.5	1FT6086-8SH7■ - ■■■■	4	66.5/0.0589	30/66.2		
	100	18.8/25.2	65/47.9	40/29.9	41	1FT6105-8SH7■ - ■■■■	4	168/0.1487	45.5/100.3		
6000	80	10.7/14.4	26/19.2	17/12.5	25.5	1FT6084-8SK7■ - ■■■■	4	48/0.0425	25/55.1		
		13.8/18.5	35/25.8	22/16.2	29	1FT6086-8SK7■ - ■■■■	4	66.5/0.0589	30/66.2		
Type:			IM B5 IM B14 ³⁾ (not for 1FT613.)			1					
						2					
Connector outlet direction (not for 1FT6136-6SF71):			Transverse right Transverse left Axial NDE (not for 1FT613.) Axial drive end (DE)			1					
						2					
						3					
						4					
Terminal box/ cable entry: (only for 1FT61)			Transverse/from right Transverse/from left axial/from NDE axial/from DE			5					
						6					
						7					
						8					
Encoder systems for motors without DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			A					
						E					
						S					
						T					
Encoder systems for motors with DRIVE-CLiQ interface:			Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution ¹⁾ Multi-pole resolver 2-pole resolver			D					
						F					
						U					
						P					
Shaft extension:			Radial eccentricity tolerance:		Holding brake:						
Fitted key and keyway			N		without						
Fitted key and keyway			N		with						
Fitted key and keyway			R		without						
Fitted key and keyway			R		with						
Plain shaft			N		without						
Plain shaft			N		with						
Plain shaft			R		without						
Plain shaft			R		with						
Vibration severity grade:			Degree of protection: ⁴⁾								
N			IP64				0				
N			IP65				1				
R			IP64				3				
R			IP65				4				

To select the degree of protection and type, see “Selection guide”.

Selection and ordering data

Motor type (continued)	Static current I_0 at M_0 $\Delta T=100$ K A	Calculated power $P_{calc} = M_0 \times$ $n_{rated}/9550$ P_{calc} for M_0 $\Delta T=100$ K kW/HP	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
			Rated output current I_{rated} A	Order No. For complete order no., see "SINAMICS S120"	Power con- nector Size	Motor cable cross section 6) mm ²	Order no. Pre-assembled cable
1FT6084-8SF7...	18.2	8.2/11	18 ⁵⁾	6SL312 - 1TE21-8AA.	1.5	4 x 2.5	6FX 002-5 S31 -....
1FT6086-8SF7...	25	11.0/14.8	30	6SL312 - 1TE23-0AA.	1.5	4 x 4	6FX 002-5 S41 -....
1FT6105-8SF7...	42	20.4/27.4	45	6SL312 - 1TE24-5AA.	3	4 x 16	6FX 002-5 S23 -....
1FT6108-8SF7...	62	28.3/37.9	60 ⁵⁾	6SL312 - 1TE26-0AA.	3	4 x 16	6FX 002-5 S23 -....
1FT6132-6SF7...	69	34.6/46.4	85	6SL312 - 1TE28-5AA.	3	4 x 25	6FX 002-5 DS33 -....
1FT6134-6SF7...	83	44.0/6	85	6SL312 - 1TE28-5AA.	3	4 x 25	6FX 002-5 DS33 -....
1FT6136-6SF7...	110	55/73.8	132	6SL312 - 1TE31-3AA.	Terminal box (max. 4 x 35)		
1FT6084-8SH7...	26	12.3/16.5	30	6SL312 - 1TE23-0AA.	1.5	4 x 4	6FX 002-5 S41 -....
1FT6086-8SH7...	38	16.5/22.1	45	6SL312 - 1TE24-5AA.	3	4 x 16	6FX 002-5 S23 -....
1FT6105-8SH7...	59	30.6/41.0	85	6SL312 - 1TE28-5AA.	3	4 x 16	6FX 002-5 S23 -....
1FT6084-8SK7...	35	16.3/21.9	45	6SL312 - 1TE24-5AA.	1.5	4 x 10	6FX 002-5 S64 -....
1FT6086-8SK7...	44	22.0/29.5	45	6SL312 - 1TE24-5AA.	3	4 x 16	6FX 002-5 S23 -....
Cooling: Internal air cooling External air cooling				0 1			
Motor Module: Single Motor Module Double Motor Module				1 2			
Power cable model: MOTION-CONNECT 800 MOTION-CONNECT 500						8 5	
Without brake cores With brake cores							C D
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

Notes on forced ventilation

	Shaft heights 80 and 100	Shaft height 132
Direction of air flow	From NDE to DE	From DE to NDE
Connection system	Connector size 1	Terminal box
Type of connecting cable	6FX.002-5CA01-....	6FX.008-1BB11-
Pin and terminal assignments	Pin 1: L1, Pin 2: N	U1/L1: V2/L2: W3/L3
Supply voltage	220/260 V 1 AC, 50/60 Hz	400/460 V 3 AC, 50/60 Hz
Max. fan current	0.3 A	0.4 A
Weight of the fan module, approx.	4.8 kg (10.6 lb)	5.6 kg (12.3 lb)
Sound pressure level	70 dB (A)	74 dB (A)

¹⁾ If the absolute encoder is used, M_{rated} is reduced by 10%.

²⁾ Not for use in environments containing electrically conductive dust. Forced ventilation cannot be used in the presence of flammable, corrosive, electrically conductive or explosive dust.

³⁾ Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.

⁴⁾ The degree of protection refers to the motor. The built-on fan meets the requirements of degree of protection IP54.

⁵⁾ With the specified Motor Module, the motor cannot be fully utilized with M_0 at $\Delta T = 100$ K winding temperature rise.

⁶⁾ The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors

Synchronous motors

1FT6 Big Servo motors
Forced ventilation

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque	Rated current	1FT6 synchronous motors Big Servo Forced ventilation ¹⁾	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}		P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No.		J	
rpm	SH	kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² / lb _f -in-s ²	kg/lb
1500	160	60.5/81.1	425/313.2	385/283.7	136	1FT6163-8SB7 6 - ■■■■	4	2300/ 2.0357	170/ 374.8
		85/114.0	600/442.2	540/398	174	1FT6168-8SB7 6 - ■■■■	4	3100/ 2.7437	210/ 463
2500	160	89/119.4	425/313.2	340/250.6	185	1FT6163-8SD7 6 - ■■■■	4	2300/ 2.0357	170/ 374.8
Type ³⁾ :				IM B35		6			
Terminal box at top, cable entry:				Transverse right		5			
				Transverse left		6			
				Axial NDE		7			
				Axial DE		8			
Encoder systems for motors without DRIVE-CLiQ interface				Increm. encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution Multi-pole resolver 2-pole resolver			A		
Encoder systems for motors with DRIVE-CLiQ interface				Increm. encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution Multi-pole resolver 2-pole resolver			E		
Shaft extension:				Radial eccentric- ity tolerance:			S		
Fitted key and keyway				N			T		
Fitted key and keyway				R					
Plain shaft				N					
Plain shaft				R					
Holding brake:				without					
				without					
				without					
				without					
Vibration severity grade:				Degree of protection: ²⁾					
N				IP64					0
N				IP65					1
R				IP64					3
R				IP65					4

To select the degree of protection and type, see “Selection guide”.

Selection and ordering data

Motor type (continued)	Static current	Calculated power	SINAMICS Motor Module Rated output current		Power cable with complete shield Motor connection via terminal box		
	I_0 at $\Delta T=100\text{ K}$	$P_{\text{calc}} = M_0 \times$ $n_{\text{rated}}/9550$ P_{calc} for M_0 $\Delta T=100\text{ K}$	$I_{\text{rated}}^{4)}$	Order No.	Terminal box type cable gland	Max. connect- able cable cross section	Order No. Power cable/ By the meter
	A	kW/HP	A	For complete order no., see "SINAMICS S120"		mm ²	
1FT6163-8SB76-....	151	66.8/89.6	200	6SL312-1TE32-0AA0	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX008-1BB50-
1FT6168-8SB76-....	194	94.2/126.3	200	6SL312-1TE32-0AA0	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX008-1BB50-
1FT6163-8SD76-....	226	111/148.9	200	6SL312-1TE32-0AA0	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX008-1BB50-
Cooling: Internal air cooling External air cooling				0 1			
Power cable model: MOTION-CONNECT 800 MOTION-CONNECT 500				8 5			
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

Notes on forced ventilation

	Shaft height 160
Direction of air flow	From DE to NDE
Connection system	Terminal box
Type of connecting cable	6FX.008-1BB11-....
Pin and terminal assignments	U1/L1: V2/L2: W3/L3
Supply voltage	400/480 V 3 AC 50/60 Hz
Max. fan current	0.8 A
Sound pressure level	74 dB (A)

1) Not for use in environments containing electrically conductive dust. Forced ventilation cannot be used in the presence of flammable, corrosive, electrically conductive or explosive dust.

2) The degree of protection refers to the motor. The built-on fan meets the requirements of degree of protection IP54.

3) 1FT616 Big Servo motors of construction type IM B35 can be mounted on the flange only.

4) Motor Modules are assigned according to the motor rated current.

AC motors
Synchronous motors

1FT6 motors, standard type
Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque	Rated current	1FT6 synchronous motors Water cooling ^{1) 2)}	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100$ K	M_0 at $\Delta T=100$ K	M_{rated} at $\Delta T=100$ K	I_{rated} at $\Delta T=100$ K	Order No. Standard type		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² /lb _f -in-s ²	kg/lb
1500	100	18.2/24.4	119/87.7	116/85.5	43	1FT6108-8WB7■ - ■■■■	4	260/0.2301	61.5/135.6
2000	100	17.2/23.1	85/62.6	82/60.4	60	1FT6105-8WC7■ - ■■■■	4	168/0.1487	45.5/100.3
		24.1/32.3	119/87.7	115/84.8	57	1FT6108-8WC7■ - ■■■■	4	260/0.2301	61.5/135.6
3000	63	3.2/4.3	10.2/7.5	10/7.4	6.9	1FT6062-6WF7■ - ■■■■	3	8.5/0.0075	9.5/20.9
		5.1/6.8	16.2/11.9	16/11.8	10.3	1FT6064-6WF7■ - ■■■■	3	13/0.0115	12.5/27.6
	80	11.0/14.8	35/25.8	35/25.8	27	1FT6084-8WF7■ - ■■■■	4	48/0.0425	21/46.3
		14.5/19.4	47/34.6	46/33.9	37	1FT6086-8WF7■ - ■■■■	4	66.5/0.0589	26/57.3
	100	24.5/32.9	85/62.6	78/57.5	82	1FT6105-8WF7■ - ■■■■	4	168/0.1487	45.5/100.3
		34.2/45.9	119/87.7	109/80.3	81	1FT6108-8WF7■ - ■■■■	4	260/0.2301	61.5/135.6
4500	63	4.7/6.3	10.2/7.5	10/7.4	9.6	1FT6062-6WH7■ - ■■■■	3	8.5/0.0075	9.5/20.9
		7.5/10.1	16.2/11.9	16/11.8	15.2	1FT6064-6WH7■ - ■■■■	3	13/0.0115	12.5/27.6
	80	16.5/22.1	35/25.8	35/25.8	39	1FT6084-8WH7■ - ■■■■	4	48/0.0425	21/46.3
		21.2/28.4	47/34.6	45/33.2	53	1FT6086-8WH7■ - ■■■■	4	66.5/0.0589	26/57.3
6000	63	6.2/8.3	10.2/7.5	9.8/7.2	12.7	1FT6062-6WK7■ - ■■■■	3	8.5/0.0075	9.5/20.9
		9.9/13.3	16.2/11.9	15.8/11.6	20	1FT6064-6WK7■ - ■■■■	3	13/0.0115	12.5/27.6
	80	21.4/28.7	35/25.8	34/25.1	51	1FT6084-8WK7■ - ■■■■	4	48/0.0425	21/46.3
		27.7/37.2	47/34.6	44/32.4	58	1FT6086-8WK7■ - ■■■■	4	66.5/0.0589	26/57.3
Type:		IM B5 IM B14 ³⁾ (not for 1FT613)				1 2			
Connector outlet direction:		Transverse right (not for 1FT606) Transverse left (not for 1FT606) Axial non-drive end (NDE) Axial DE (1FT6062 <u>only</u> with water connect. on side or below) ²⁾				1 2 3 4			
Terminal box/ cable entry: (<u>only</u> for 1FT61)		Transverse/from right Transverse/from left axial/from NDE axial/from DE				5 6 7 8			
Encoder systems for motors without DRIVE-CLiQ interface:		Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution Multi-pole resolver 2-pole resolver				A E S T			
Encoder systems for motors with DRIVE-CLiQ interface:		Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution Multi-pole resolver 2-pole resolver				D F U P			
Shaft extension:		Radial eccentricity tolerance:		Holding brake:		A B D E G H K L			
Fitted key and keyway		N		without					
Fitted key and keyway		N		with					
Fitted key and keyway		R		without					
Fitted key and keyway		R		with					
Plain shaft		N		without					
Plain shaft		N		with					
Plain shaft		R		without					
Plain shaft		R		with					
Vibration severity grade:		Degree of protection:				0 1 2 6 3 4 5 7			
N		IP64							
N		IP65							
N		IP67							
N		IP68							
R		IP64							
R		IP65							
R		IP67							
R		IP68							

Selection and ordering data

Motor type (continued)	Static current I_0 at M_0 $\Delta T = 100$ K A	Calculated power $P_{\text{calc}} = M_0 \times \frac{n_{\text{rated}}}{9550}$ P_{calc} for M_0 $\Delta T = 100$ K kW/HP	SINAMICS Motor Module		Power cable with complete shield Motor terminal (and brake terminal) via power connector		
			Rated output current I_{rated} A	Order No. For complete order no., see "SINAMICS S120"	Power con- nector Size	Motor cable cross section ⁵⁾ mm ²	Order no. Pre-assembled cable
1FT6108-8WB7...	43	18.7/25.1	45	6SL312- 1TE24-5AA.	3	4 x 16	6FX 002-5 S23-....
1FT6105-8WC7...	58	17.8/23.9	60	6SL312- 1TE26-0AA.	3	4 x 16	6FX 002-5 S23-....
1FT6108-8WC7...	57	24.9/33.4	60	6SL312- 1TE26-0AA.	3	4 x 16	6FX 002-5 S23-....
1FT6062-6WF7...	6.9	3.2/4.3	9	6SL312- TE21-0AA.	1	4 x 1.5	6FX 002-5 S01-....
1FT6064-6WF7...	10.3	5.1/6.8	18	6SL312- TE21-8AA.	1	4 x 1.5	6FX 002-5 S01-....
1FT6084-8WF7...	24.5	11.0/14.8	30	6SL312- 1TE23-0AA.	1.5	4 x 4	6FX 002-5 S41-....
1FT6086-8WF7...	34	14.8/19.9	45	6SL312- 1TE24-5AA.	1.5	4 x 10	6FX 002-5 S64-....
1FT6105-8WF7...	83	26.7/35.8	85	6SL312- 1TE28-5AA.	3	4 x 25	6FX 002-5DS33-....
1FT6108-8WF7...	86	37.4/50.2	85 ⁴⁾	6SL312- 1TE28-5AA.	3	4 x 35	6FX 002-5DS43-....
1FT6062-6WH7...	9.7	4.8/6.4	18	6SL312- TE21-8AA.	1	4 x 1.5	6FX 002-5 S01-....
1FT6064-6WH7...	15.4	7.6/10.2	18	6SL312- TE21-8AA.	1	4 x 2.5	6FX 002-5 S11-....
1FT6084-8WH7...	37	16.5/22.1	45	6SL312- 1TE24-5AA.	1.5	4 x 10	6FX 002-5 S64-....
1FT6086-8WH7...	52	22.1/29.6	60	6SL312- 1TE26-0AA.	3	4 x 16	6FX 002-5 S23-....
1FT6062-6WK7...	12.9	6.4/8.6	18	6SL312- TE21-8AA.	1	4 x 1.5	6FX 002-5 S01-....
1FT6064-6WK7...	20.5	10.2/13.7	30	6SL312- 1TE23-0AA.	1	4 x 2.5	6FX 002-5 S11-....
1FT6084-8WK7...	47	22.0/29.5	60	6SL312- 1TE26-0AA.	3	4 x 16	6FX 002-5 S23-....
1FT6086-8WK7...	59	29.5/39.6	60	6SL312- 1TE26-0AA.	3	4 x 16	6FX 002-5DS23-....
Cooling: Internal air cooling External air cooling				0 1			
Motor Module: Single Motor Module Double Motor Module				1 2			
Power cable model: MOTION-CONNECT 800 MOTION-CONNECT 500						8 5	
Without brake cores With brake cores							C D
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

Notes on water cooling:

- Inlet temperature of cooling water: max. 30 °C (86 °F)
- Cooling water throughput: at least 5 l/min
(1.1 British gallons/1.32 US gallons)
- Pressure ahead of motor: $p_{\text{max}} = 3$ bar (43.5 psi)
- Cooling water connection: G 3/8"
- Coolant: Water with up to 25% corrosion protection
(recommendation: Tyfocor)
- Loss of pressure between inlet and outlet < 0.1 bar (1.45 psi)

¹⁾ Delivered as standard with water connection "at top".

²⁾ Water connection on right side: Order code **Q20**
Water connection on left side: Order code **Q21**
Water connection at bottom: Order code **Q22**

³⁾ Same flange as for IM B5 type, but with metric threaded insert in the four mounting holes.

⁴⁾ With the specified Motor Module, the motor cannot be fully utilized with M_0 at $\Delta T = 100$ K winding temperature rise.
If a Motor Module with a higher rating is used, you must check whether the specified power cable can be connected to it.

⁵⁾ The current carrying capacity of the power cables corresponds to IEC 60204-1 for type of routing C under continuous operation conditions with an ambient air temperature of +40 °C (104 °F), designed for I_0 (100 K), PVC/PUR-insulated cable.

AC motors

Synchronous motors

1FT6 Big Servo motors

Water cooling

Selection and ordering data

Rated speed	Shaft height	Rated power	Static torque	Rated torque	Rated current	1FT6 synchronous motors Big Servo Water cooling	Number of pole pairs	Rotor moment of inertia (without brake)	Weight (without brake)
n_{rated}	SH	P_{rated} at $\Delta T=100\text{ K}$	M_0 at $\Delta T=100\text{ K}$	M_{rated} at $\Delta T=100\text{ K}$	I_{rated} at $\Delta T=100\text{ K}$	Order No.		J	m
rpm		kW/HP	Nm/lb _f -ft	Nm/lb _f -ft	A			10 ⁻⁴ kgm ² / lb _f -in-s ²	kg/lb
1500	132	23.6/31.7	155/114.2	150/110.6	58	1FT6132-6WB76 - ■■■■	3	430/0.3805	90/198.5
		29.1/39.0	200/147.4	185/136.6	67	1FT6134-6WB76 - ■■■■	3	547/0.4841	103/227.1
		36.1/48.4	240/176.9	230/169.5	90	1FT6136-6WB76 - ■■■■	3	665/0.5885	120/264.6
		45.5/61.0	300/221.1	290/213.7	112	1FT6138-6WB76 - ■■■■	3	845/0.7478	137/302.1
	160	70.7/94.8	450/331.7	450/331.7	160	1FT6163-8WB76 - ■■■■	4	2300/2.0357	170/374.8
		108.4/145.4	700/515.9	690/508.5	221	1FT6168-8WB76 - ■■■■	4	3100/2.7437	210/463
2500	132	35.3/47.3	155/114.2	135/99.5	82	1FT6132-6WD76 - ■■■■	3	430/0.3805	90/198.5
		48.4/64.9	200/147.4	185/136.3	115	1FT6134-6WD76 - ■■■■	3	547/0.4841	103/227.1
		57.6/77.2	240/176.9	220/162.1	149	1FT6136-6WD76 - ■■■■	3	665/0.5885	120/264.6
		72.0/96.6	300/221.1	275/202.7	162	1FT6138-6WD76 - ■■■■	3	845/0.7874	137/302.1
	160	117.8/158.0	450/331.7	450/331.7	240	1FT6163-8WD76 - ■■■■	4	2300/2.0357	170/374.8

Type ¹⁾ :	IM B35	6			
Terminal box/ cable entry:	Transverse/from right Transverse/from left Axial/from NDE Axial/from DE	5 6 7 8			
Encoder systems for motors without DRIVE-CLiQ interface:	Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution Multi-pole resolver 2-pole resolver	A E S T			
Encoder systems for motors with DRIVE-CLiQ interface:	Incremental encoder sin/cos 1 V _{pp} 2048 pulses/revolution Absolute encoder EnDat 2048 pulses/revolution Multi-pole resolver 2-pole resolver	D F U P			
Shaft extension:	Radial eccentricity tolerance:	Holding brake:			
Fitted key and keyway	N	without			
Fitted key and keyway	R	without			
Plain shaft	N	without			
Plain shaft	R	without			
Vibration severity grade:	Degree of protection:				
N	IP64				0
N	IP65				1
R	IP64				3
R	IP65				4

To select the degree of protection, see “Selection guide”.

Selection and ordering data

Motor type (continued)	Static current	Calculated power $P_{\text{calc}} = M_0 \times n_{\text{rated}}/9550$	SINAMICS Motor Module		Power cable with complete shield Motor terminal via terminal box		
	I_0 at M_0 $\Delta T=100 \text{ K}$ A	P_{calc} for M_0 $\Delta T=100 \text{ K}$ kW/HP	Rated output current I_{rated} A	Order No. For complete order no., see "SINAMICS S120"	Terminal box type cable gland	Max. con- nectable cable cross section mm ²	Order No. Power cable By the meter
1FT6132-6WB76-...	58	24.3/23.6	60	6SL312 -1TE 26-0AA.	gk 630 2 x M32 x 1.5	2 x 4 x 16	6FX0008-1BB61-....
1FT6134-6WB76-...	73	31.4/42.1	85	6SL312 -1TE 28-5AA.	gk 630 2 x M40 x 1.5	2 x 4 x 35	6FX0008-1BB35-....
1FT6136-6WB76-...	92	37.7/50.6	132	6SL312 -1TE 31-3AA.	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
1FT6138-6WB76-...	112	47.1/63.2	132	6SL312 -1TE 31-3AA.	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
1FT6163-8WB76-...	160	70.7/94.8	200	6SL312 -1TE 32-0AA.	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
1FT6168-8WB76-...	225	110/147.5	260	6SL3320 -1TE 32-6AA0	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
1FT6132-6WD76-...	92	40.6/54.4	85	6SL312 -1TE 28-5AA.	gk 630 2 x M40 x 1.5	2 x 4 x 35	6FX0008-1BB35-....
1FT6134-6WD76-...	122	52.4/70.3	132	6SL312 -1TE 31-3AA.	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
1FT6136-6WD76-...	158	62.8/84.2	200	6SL312 -1TE 32-0AA.	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
1FT6138-6WD76-...	167	78.5/105.3	200	6SL312 -1TE 32-0AA.	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
1FT6163-8WD76-...	240	118/158.2	260	6SL3320 -1TE 32-6AA0	gk 630 2 x M50 x 1.5	2 x 4 x 50	6FX0008-1BB50-....
Cooling: Internal air cooling External air cooling				0 1			
Motor Module: Single Motor Module				1			
Power cable model: MOTION-CONNECT 800 MOTION-CONNECT 500						8 5	
For length code as well as power and signal cables, see "MOTION-CONNECT cables and connections".							

Notes on water cooling

- Inlet temperature of cooling water: max. 30 °C (86 °F)
- Cooling water throughput:
at least 8 l/min (1.76 British gallons/2.11 US gallons)
with 1FT613.
at least 10 l/min (2.2 British gallons/2.64 US gallons)
with 1FT616.
- Pressure ahead of motor: $p_{\text{max}} = 6 \text{ bar}$ (87 psi)
- Cooling water connection: G 3/8" with 1FT613.
G 1/2" with 1FT616.
- Coolant: Water with up to max. 25% corrosion protection,
(recommendation: Tyfocor)
- Loss of pressure between inlet and outlet < 0.1 bar (1.45 psi)

¹⁾ 1FT616 Big Servo motors of construction type IM B35 can be mounted on the flange only.