

1.2 Order designation

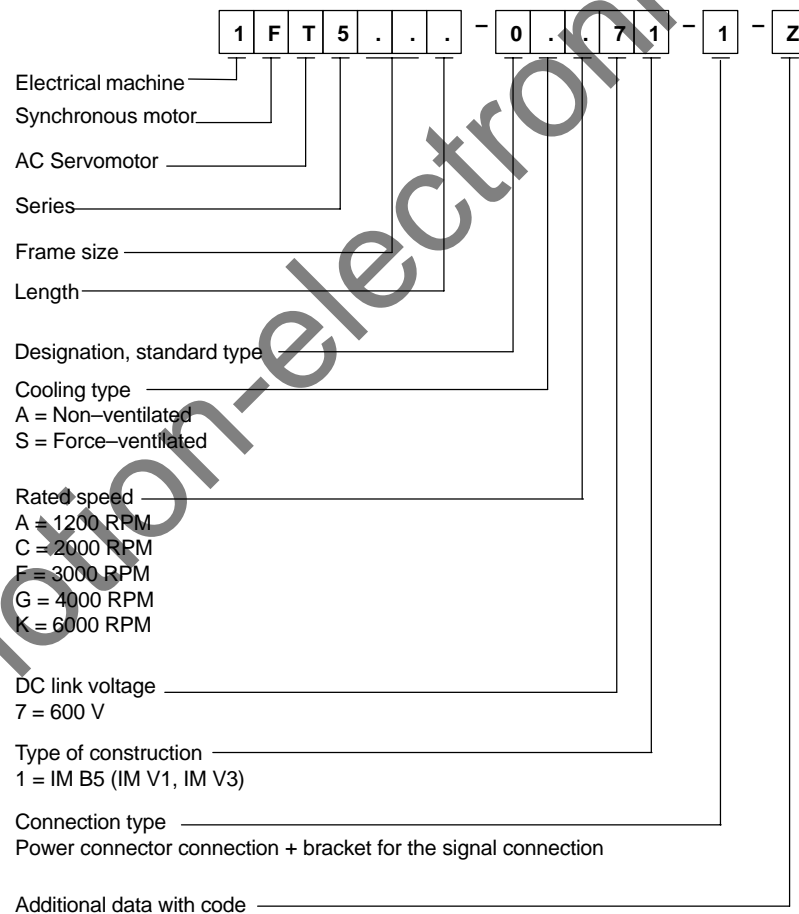
1.2 Order designation

Structure of the order designation

The order designation comprises a combination of digits and letters. It is subdivided into four hyphenated blocks.

The first block has seven positions and designates the machine type. Additional features are coded in the second block. The third and fourth blocks are provided for additional data.

1.2.1 Order designation, standard types



Supplementary data for standard types and options

Plain text data	Brief designation
Degree of protection IP 67 (not for force-ventilated motors) ⁷⁾ IP 68 (not for force-ventilated motors) ⁷⁾	K93 M24
Second rating plate (this is standard for core types)	K31
Connector outlet direction ¹⁾ Cable entry from the drive end	K83 ^{4) 7) 11)}
Cable entry from the non-drive end	K84 ^{4) 7)}
rotated through 180° (with respect to the Standard)	K85 ⁷⁾
Radial shaft sealing acc. to DIN 3760	K18
Shaft end: Smooth shaft	K42
Vibration severity (ISO 2373) Severity R (reduced) 600 to 1800 RPM ≤ 0.71 mm/s >1800 to 3600 RPM ≤ 1.12 mm/s	K01
Shaft and flange precision, tolerance R acc. to DIN 42955	K04
Motor with mounted pulse encoder ⁹⁾ 5000 pulses/revolutions ⁷⁾ 2500 pulses/revolutions ⁷⁾ 2000 pulses/revolutions ⁷⁾ 1000 pulses/revolutions ⁷⁾	H28 H27 H26 H22
The motor is prepared for mounting an encoder (incremental or absolute) with synchronous flange ^{2) 7) 11)}	G51
Motor with mounted ROD 320 pulse encoder ^{3) 6)} 5000 pulses/revolutions ⁷⁾ 2500 pulses/revolutions ⁷⁾ 2000 pulses/revolutions ⁷⁾ 1250 pulses/revolutions ⁷⁾	H04 G44 G42 H01
Holding brake (integrated) ⁸⁾	G45
Motor with mounted planetary gear ^{10) 11)}	V□□
Working brake; mounted ^{4) 11)}	C00
Prepared with a retrofit kit for mounting an encoder (G51) with mounting instructions ⁵⁾	EWN: 519.4033804: 1FT5034 to 1FT5036 519.4033803: 1FT5042 to 1FT5046 519.4033801: 1FT5062 to 1FT5066 519.4033802: 1FT5072 to 1FT5108

- 1) Standard version corresponding to the dimension drawings
- 2) For 1FT503□, 1FT504□ absolute value encoder mounting, only on request; not for force-ventilated motors
- 3) For 1FT503□, 1FT504□ not possible; not for force-ventilated motors
- 4) For 1FT503□, 1FT504□ and 1FT506□ not possible
- 5) Only available ex-stock up to 2 motors per motor version
- 6) Limiting frequency: 300 kHz; motors may only be designed for a winding temperature rise $\Delta T=60$ K. Cannot be combined with an axial connector outlet at the non-drive end.
- 7) Options mutually exclude one another
- 8) For motors with brake, axial forces are not permissible in operation
- 9) Pulse encoder with axial cable outlet
- 10) Only vibration severity stage N can be guaranteed for the motor and gearbox unit
- 11) Not possible for short motors

Table 2-2 Standard 1FT5036 motor

1FT5036				
Technical data	Code	Units	–□AK71	
Engineering data				
Rated speed	n_N	RPM	6000	
Rated torque (100 K)	M_N (100 K)	Nm	1.0	
Rated current	I_N	A	2.0	
Standstill torque (60 K)	M_0 (60 K)	Nm	1.0	
Standstill torque (100 K)	M_0 (100 K)	Nm	1.3	
Standstill current (60 K)	I_0 (60 K)	A	1.7	
Standstill current (100 K)	I_0 (100 K)	A	2.3	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm ²	1.03	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm ²	0.96	
Limiting data				
Maximum speed	n_{max}	RPM	9000	
Maximum torque	M_{max}	Nm	5.2	
Max. current	I_{max}	A	9.5	
Limiting torque	M_{limit}	Nm	2.5	
Physical constants				
Torque constant	k_T	Nm/A	0.58	
Voltage constant	k_E	V/1000 RPM	70	
Winding resistance	$R_{ph.}$	Ohm	8.6	
Rotating field inductance	L_D	mH	13.7	
Electrical time constant	T_{el}	ms	1.5	
Mechanical time constant	T_{mech}	ms	4.9	
Thermal time constant	T_{th}	min	45	
Weight (with brake)	m	kg	3.3	
Weight (without brake)	m	kg	3.1	

Fig. 2-2 Speed–torque diagram, 1FT5036

1) applies for a 600 V DC link voltage

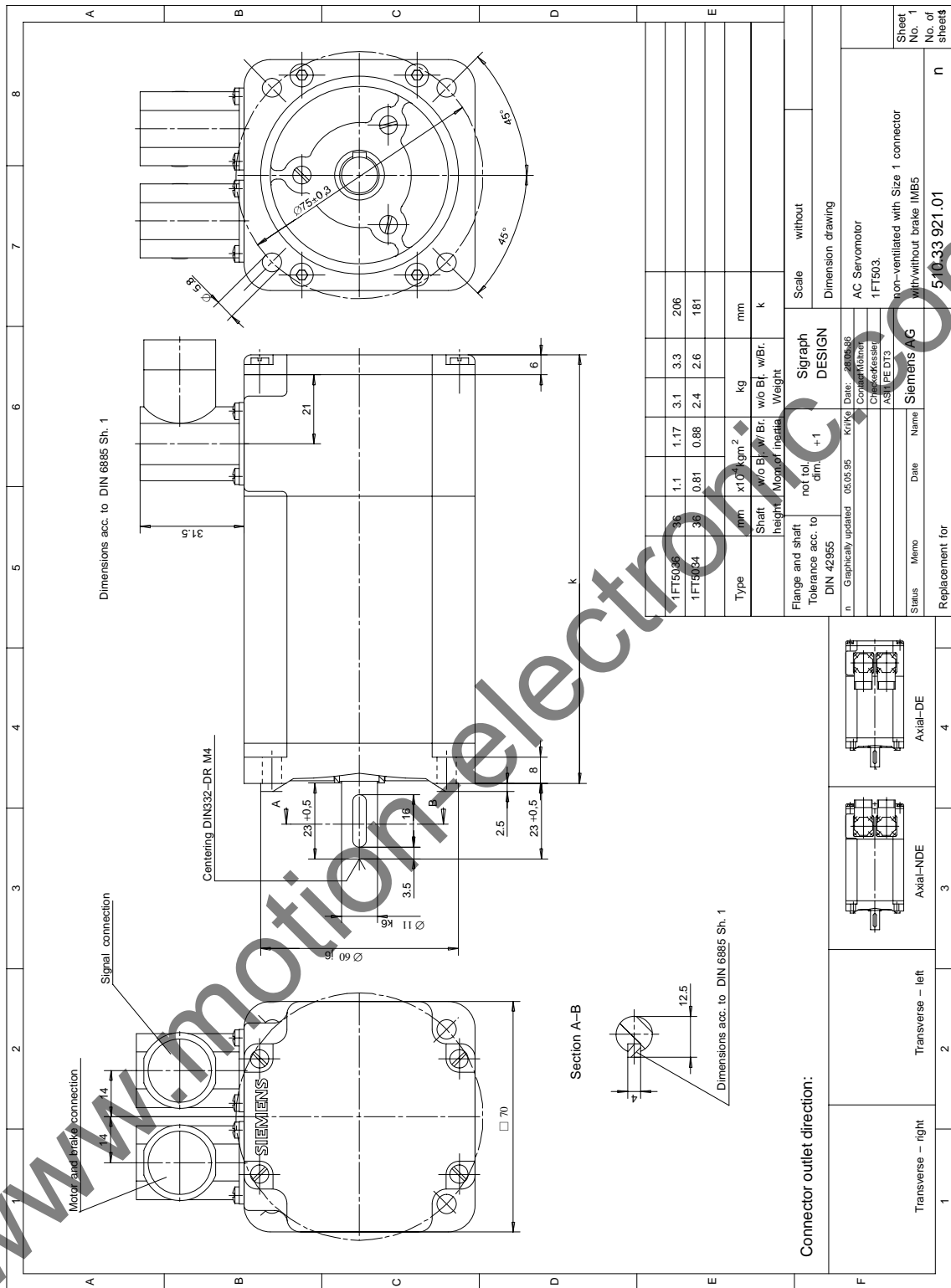


Fig. 4-1 1FT503 non-ventilated with Size 1 connector