

Table 3-11 1FT6064 natural cooling

1FT6064				
Technical data	Code	Units	-6AC7	-6AF7
Engineering data				
Rated speed	n_N	rpm	2000	3000
Number of poles	2p		6	6
Rated torque (100 K)	$M_{N(100\text{ K})}$	Nm	8.0	7.0
Rated current (100K)	I_N	A	3.8	4.9
Stall torque (60K)	$M_{0(60\text{ K})}$	Nm	7.9	7.9
Stall torque (100K)	$M_{0(100\text{ K})}$	Nm	9.5	9.5
Stall current (60K)	$I_{0(60\text{ K})}$	A	3.4	4.9
Stall current (100K)	$I_{0(100\text{ K})}$	A	4.2	6.1
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	16.3	16.3
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	13	13
Optimum operating point				
Optimum speed	n_{opt}	rpm	2000	3000
Optimum power	P_{opt}	kW	1.68	2.20
Limiting data				
Max. permissible speed (mech.)	n_{max}	rpm	9100	9100
Maximum torque	M_{max}	Nm	38	38
Maximum current	I_{max}	A	23	33
Physical constants				
Torque constant	k_T	Nm/A	2.26	1.57
Voltage constant	k_E	V/1000 rpm	144	100
Winding resistance at 20 °C	R_{ph}	Ohm	2.93	1.40
Rotating field inductance	L_D	mH	28	13.5
Electrical time constant	T_{el}	ms	9.6	9.6
Shaft torsional stiffness	c_t	Nm/rad	27000	27000
Mechanical time constant	T_{mech}	ms	2.2	2.2
Thermal time constant	T_{th}	min	35	35
Weight with brake	m	kg	13	13
Weight without brake	m	kg	12.5	12.5

e-Servo



Fig. 6-4