

Table 3-29 1FT6132 natural cooling

1FT6132				
Technical data	Code	Units	-6AF71	
Engineering data				
Rated speed	n_N	rpm	3000	
Number of poles	2p		6	
Rated torque (100 K)	$M_{N(100\text{ K})}$	Nm	36	
Rated current (100K)	I_N	A	23	
Stall torque (60K)	$M_{0(60\text{ K})}$	Nm	62	
Stall torque (100K)	$M_{0(100\text{ K})}$	Nm	75	
Stall current (60K)	$I_{0(60\text{ K})}$	A	35	
Stall current (100K)	$I_{0(100\text{ K})}$	A	43	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	508	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	430	
Optimum operating point				
Optimum speed	n_{opt}	rpm	2500	
Optimum power	P_{opt}	kW	12.0	
Limiting data				
Max. permissible speed (mech.)	n_{max}	rpm	3600	
Maximum torque	M_{max}	Nm	248	
Maximum current	I_{max}	A	192	
Physical constants				
Torque constant				
Voltage constant	k_T	Nm/A	1.74	
Winding resistance at 20 °C	k_E	V/1000 rpm	112	
Rotating field inductance	R_{ph}	Ohm	0.057	
Electrical time constant	L_D	mH	1.85	
Shaft torsional stiffness	T_{el}	ms	37	
Mechanical time constant	c_t	Nm/rad	258000	
Thermal time constant	T_{mech}	ms	2.4	
Weight with brake	T_{th}	min	65	
Weight without brake	m	kg	95	
	m	kg	85	

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