

Table 3-39 1FT6108 force ventilated

1FT6108				
Technical data	Code	Units	-8SF7	
Engineering data				
Rated speed	n_N	rpm	3000	
Number of poles	2p		8	
Rated torque (100 K)	$M_{N(100\ K)}$	Nm	70	
Rated current (100K)	I_N	A	53	
Stall torque (60K)	$M_{0(60\ K)}$	Nm	75	
Stall torque (100K)	$M_{0(100\ K)}$	Nm	90	
Stall current (60K)	$I_{0(60\ K)}$	A	51	
Stall current (100K)	$I_{0(100\ K)}$	A	62	
Moment of inertia (with brake)	J_{mot}	$10^{-4}\ kgm^2$	291	
Moment of inertia (without brake)	J_{mot}	$10^{-4}\ kgm^2$	260	
Optimum operating point				
Optimum speed	n_{opt}	rpm	3000	
Optimum power	P_{opt}	kW	22.0	
Limiting data				
Max. permissible speed (mech.)	n_{max}	rpm	5600	
Maximum torque	M_{max}	Nm	220	
Maximum current	I_{max}	A	231	
Physical constants				
Torque constant				
Voltage constant	k_T	Nm/A	1.45	
Winding resistance at 20 °C	k_E	V/1000 rpm	92	
Rotating field inductance	R_{ph}	Ohm	0.048	
Electrical time constant	L_D	mH	1.1	
Shaft torsional stiffness	T_{el}	ms	23.0	
Mechanical time constant	c_t	Nm/rad	92000	
Thermal time constant	T_{mech}	ms	1.8	
Weight with brake	T_{th}	min	20	
Weight without brake	m	kg	66	
	m	kg	61.5	

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