

Table 3-17 1FT6084 natural cooling

1FT6084					
Technical data	Code	Units	-8AC7	- AF7	
Engineering data					
Rated speed	n_N	rpm	2000	3000	
Number of poles	2p		4	4	
Rated torque (100 K)	$M_{N(100\text{ K})}$	Nm	16.9	14.7	
Rated current (100K)	I_N	A	8.3	11	
Stall torque (60K)	$M_{0(60\text{ K})}$	Nm	16.6	16.6	
Stall torque (100K)	$M_{0(100\text{ K})}$	Nm	20	20	
Stall current (60K)	$I_{0(60\text{ K})}$	A	7.2	10.7	
Stall current (100K)	$I_{0(100\text{ K})}$	A	8.8	13.2	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	61.1	61.1	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	48	48	
Optimum operating point					
Optimum speed	n_{opt}	rpm	2000	3000	
Optimum power	P_{opt}	kW	3.54	4.62	
Limiting data					
Max. permissible speed (mech.)	n_{max}	rpm	7900	7900	
Maximum torque	M_{max}	Nm	65	65	
Maximum current	I_{max}	A	38	56	
Physical constants					
Torque constant					
Voltage constant	k_T	Nm/A	2.26	1.52	
Winding resistance at 20 °C	k_E	V/1000 rpm	144	97	
Rotating field inductance	R_{ph}	Ohm	0.91	0.41	
Electrical time constant	L_D	mH	10.4	4.8	
Shaft torsional stiffness	T_{el}	ms	11.4	11.7	
Mechanical time constant	c_t	Nm/rad	76000	76000	
Thermal time constant	T_{mech}	ms	2.6	2.6	
Weight with brake	T_{th}	min	35	35	
Weight without brake	m	kg	24	24	
	m	kg	20.5	20.5	

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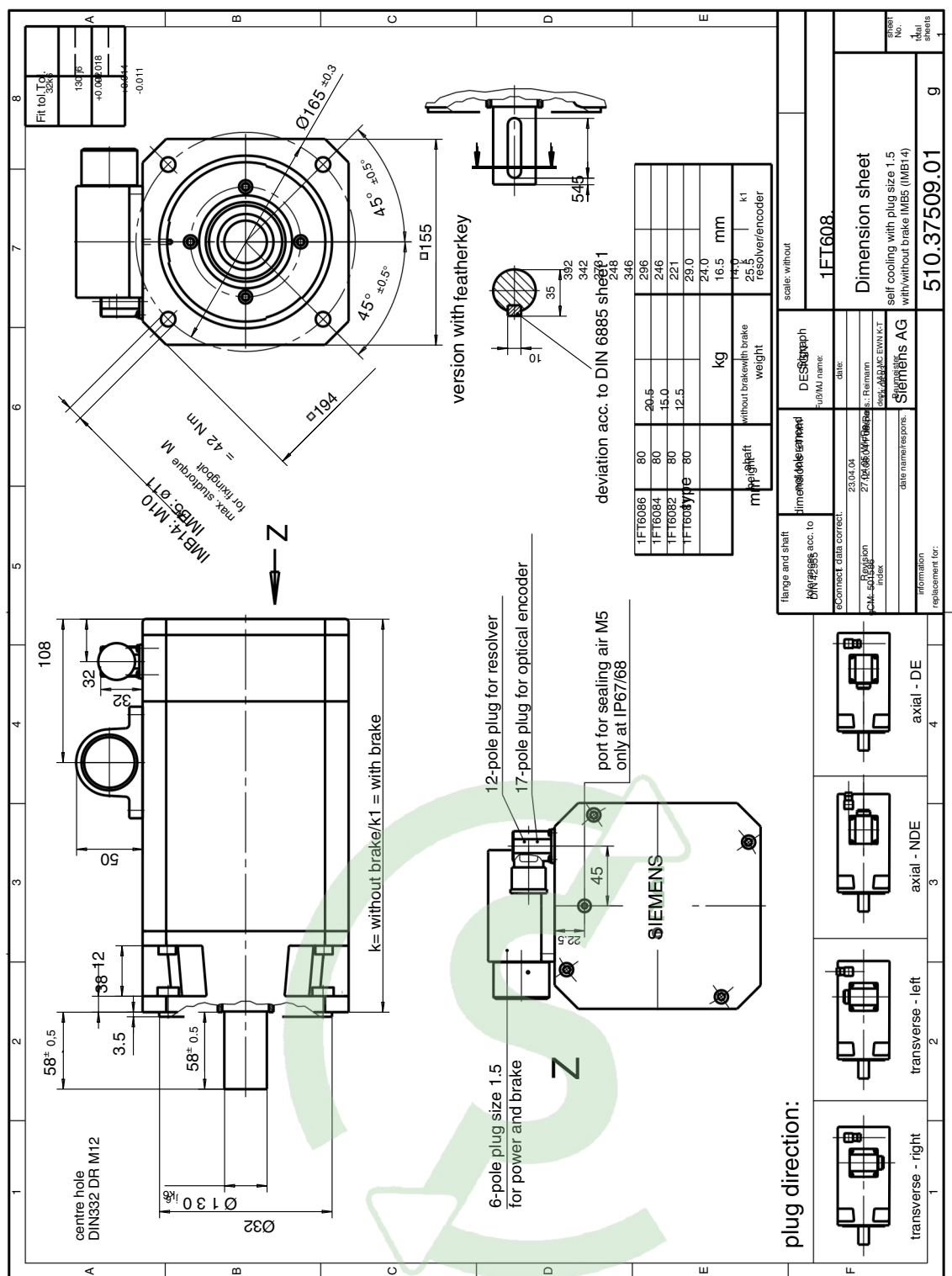


Fig. 6-5 1FT608 naturally cooled with connector, Size 1.5

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