Table 2-9 1FT6062 non–ventilated

1FT6062					
Technical data	Code	Units	–6AC7□	–6AF7□	
Engineering data					
Rated speed	n_N	RPM	2000	3000	
Number of poles	2p		6	6	
Rated torque (100K)	$M_{N\ (100K)}$	Nm	5.2	4.7	
Rated current (100K)	$I_{N\ (100K)}$	A	2.6	3.4	
Standstill torque (60K)	$M_{0\ (60K)}$	Nm	5	5	
Standstill torque (100K)	$M_{0\ (100K)}$	Nm	6	6	
Standstill current (60K)	$I_{0\ (60K)}$	A	2.2	3.3	
Standstill current (100K)	$I_{0\ (100K)}$	A	2.7	4.1	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	11.8	11.8	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	8.5	8.5	
Optimum operating point					
Optimum speed	n_{opt}	RPM	2000	3000	
Optimum power	P_{opt}	kW	1.09	1.48	
Limiting data					
Max. perm. speed (mech.)	n_{max}	RPM	9100	9100	
Maximum torque	M_{max}	Nm	24	24	
Maximum current	I_{max}	A	15	22	
Physical constants					
Torque constant	k_T	Nm/A	2.22	1.48	
Voltage constant	k_E	V/1000 RPM	141	94	
Winding resistance at 20°C	R_{ph}	Ohm	5.8	2.57	
Rotating field inductance	L_D	mH	43	19	
Electrical time constant	T_{el}	ms	7.4	7.4	
Shaft torsional stiffness	c_t	Nm/rad	32000	32000	
Mechanical time constant	T_{mech}	ms	3.0	3.0	
Thermal time constant	T_{th}	min	30	30	
Weight with brake	m	kg	11	11	
Weight without brake	m	kg	9.5	9.5	

Table 2-10 1FT6062 non–ventilated

1FT6062					
Technical data	Code	Units	–6AH7□	–6AK7□	
Engineering data					
Rated speed	n_N	RPM	4500	6000	
Number of poles	2p		6	6	
Rated torque (100K)	$M_{N\ (100K)}$	Nm	3.6	2.1	
Rated current (100K)	$I_{N\ (100K)}$	A	3.9	3.2	
Standstill torque (60K)	$M_{0\ (60K)}$	Nm	5	5	
Standstill torque (100K)	$M_{0\ (100K)}$	Nm	6	6	
Standstill current (60K)	$I_{0\ (60K)}$	A	4.7	6.2	
Standstill current (100K)	$I_{0\ (100K)}$	A	5.7	7.6	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	11.8	11.8	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	8.5	8.5	
Optimum operating point					
Optimum speed	n_{opt}	RPM	4500	4500	
Optimum power	P_{opt}	kW	1.70	1.70	
Limiting data					
Max. perm. speed (mech.)	n_{max}	RPM	9100	9100	
Maximum torque	M_{max}	Nm	24	24	
Maximum current	I_{max}	A	31	41	
Physical constants					
Torque constant	k_T	Nm/A	1.05	0.79	
Voltage constant	k_E	V/1000 RPM	67	50	
Winding resistance at 20°C	R_{ph}	Ohm	1.31	0.74	
Rotating field inductance	L_D	mH	9.7	5.5	
Electrical time constant	T_{el}	ms	7.4	7.4	
Shaft torsional stiffness	c_t	Nm/rad	32000	32000	
Mechanical time constant	T_{mech}	ms	3.0	3.0	
Thermal time constant	T_{th}	min	30	30	
Weight with brake	m	kg	11	11	
Weight without brake	m	kg	9.5	9.5	

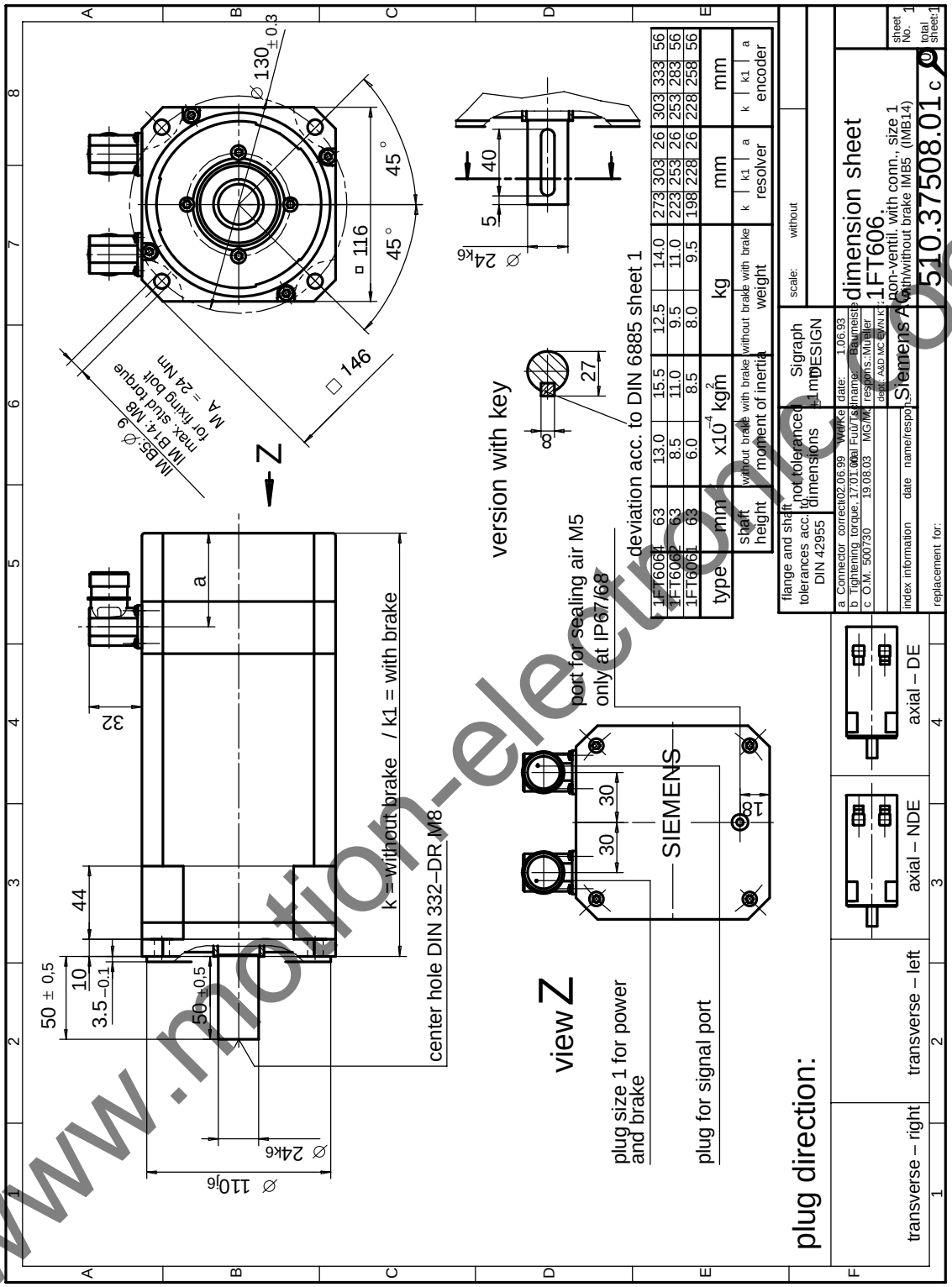

Fig. 4-4 1FT606□ non–ventilated with connector, Size 1