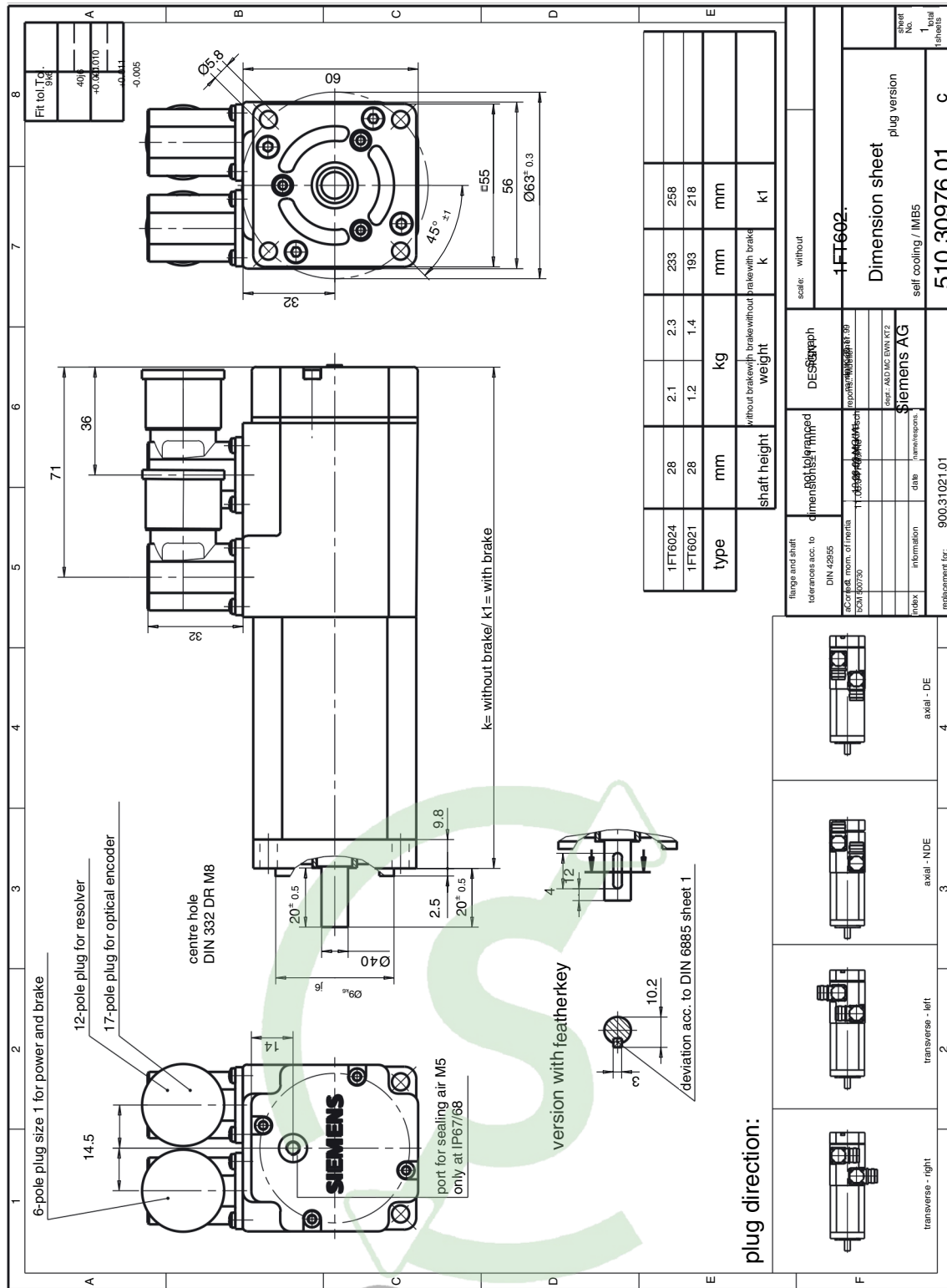


Table 3-1 1FT6021 natural cooling

1FT6021				
Technical data	Code	Units	-6AK71	
Engineering data				
Rated speed	n_N	rpm	6000	
Number of poles	2p		6	
Rated torque (100 K)	$M_{N(100\text{ K})}$	Nm	0.3	
Rated current (100K)	I_N	A	1.1	
Stall torque (60K)	$M_{0(60\text{ K})}$	Nm	0.33	
Stall torque (100K)	$M_{0(100\text{ K})}$	Nm	0.40	
Stall current (60K)	$I_{0(60\text{ K})}$	A	1.0	
Stall current (100K)	$I_{0(100\text{ K})}$	A	1.25	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	0.28	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	0.21	
Optimum operating point				
Optimum speed	n_{opt}	rpm	6000	
Optimum power	P_{opt}	kW	0.19	
Limiting data				
Max. permissible speed (mech.)	n_{max}	rpm	12000	
Maximum torque	M_{max}	Nm	1.5	
Maximum current	I_{max}	A	5	
Physical constants				
Torque constant	k_T	Nm/A	0.32	
Voltage constant	k_E	V/1000 rpm	20.5	
Winding resistance at 20 °C	R_{ph}	Ohm	7.2	
Rotating field inductance	L_D	mH	4	
Electrical time constant	T_{el}	ms	0.56	
Shaft torsional stiffness	c_t	Nm/rad	3000	
Mechanical time constant	T_{mech}	ms	4.4	
Thermal time constant	T_{th}	min	15	
Weight with brake	m	kg	1.4	
Weight without brake	m	kg	1.2	

e-Servo



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