Table 3-25 1FT6105 natural cooling

1FT6105				
Technical data	***Code***	***Units***	***-8AF7***	
Engineering data				
Rated speed	n_N	rpm	3000	
Number of poles	2p		8	
Rated torque (100 K)	$M_{N(100\ K)}$	Nm	31	
Rated current (100K)	I_N	A	22.5	
Stall torque (60K)	$M_{0(60\ K)}$	Nm	42	
Stall torque (100K)	$M_{0(100\ K)}$	Nm	50	
Stall current (60K)	$I_{0(60\ K)}$	A	26	
Stall current (100K)	$I_{0(100\ K)}$	A	32	
Moment of inertia (with brake)	J_{mot}	10^{-4} kgm^2	199	
Moment of inertia (without brake)	J_{mot}	10^{-4} kgm^2	168	
Optimum operating point				
Optimum speed	n_{opt}	rpm	3000	
Optimum power	P_{opt}	kW	9.74	
Limiting data				
Max. permissible speed (mech.)	n_{max}	rpm	5600	
Maximum torque	M_{max}	Nm	140	
Maximum current	I_{max}	A	155	
Physical constants				
Torque constant	k_T	Nm/A	1.56	
Voltage constant	k_E	V/1000 rpm	99	
Winding resistance at 20 °C	R_{ph}	Ohm	0.098	
Rotating field inductance	L_D	mH	2.1	
Electrical time constant	T_{el}	ms	21	
Shaft torsional stiffness	c_t	Nm/rad	11300	
Mechanical time constant	T_{mech}	ms	0 2.0	
Thermal time constant	T_{th}	min	45	
Weight with brake	m	kg	44	
Weight without brake	m	kg	39.5	

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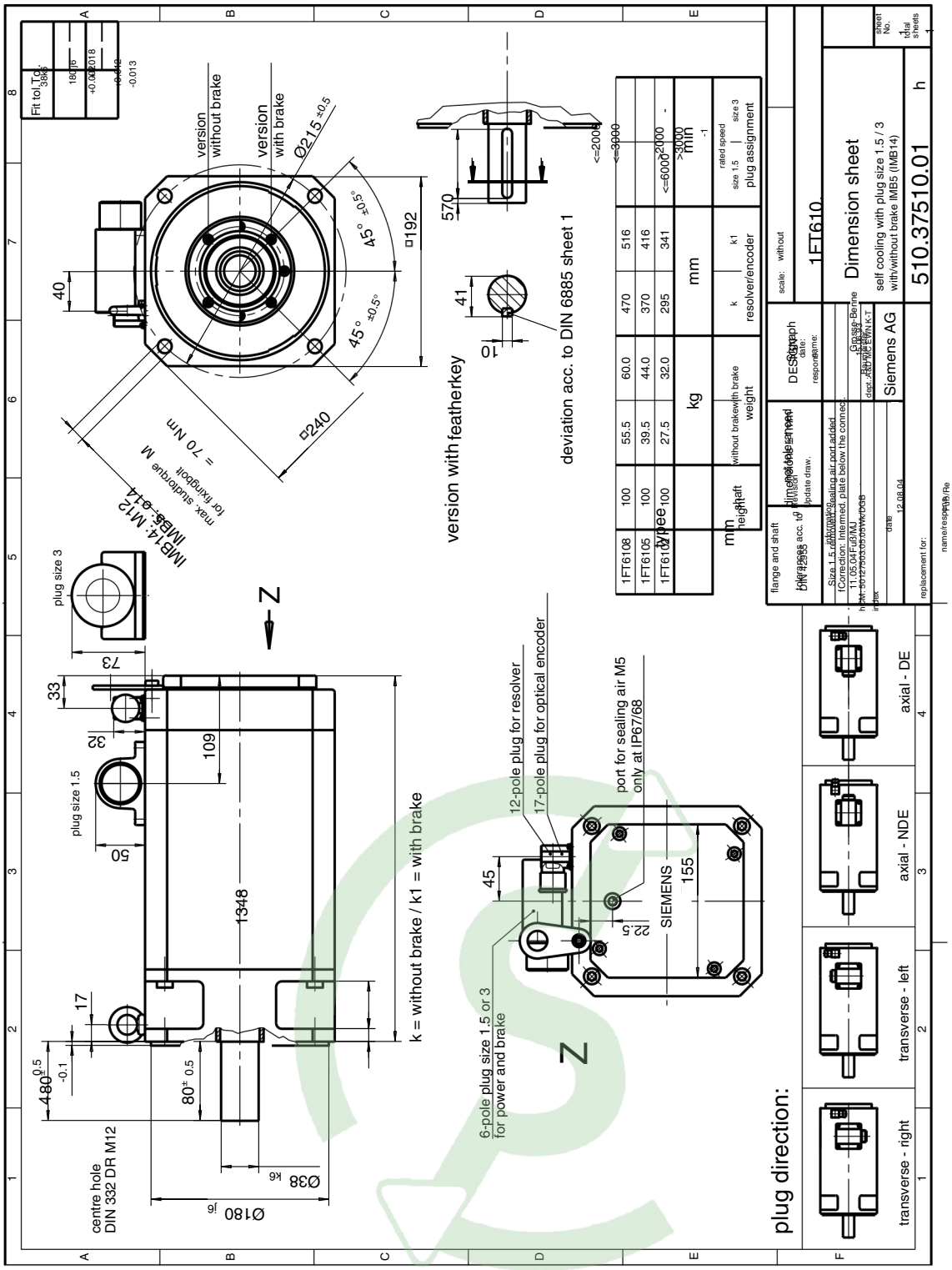

Fig. 6-6 1FT610 naturally cooled with connector, Size 1.5

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