

1FK7033 - 4CK7 three-phase servomotor			
Technical data	Character	Unit	Value
Configuration data:			
Rated speed	n_N	rpm	6000
Rated torque (100 K)	$M_{N(100K)}$	Nm	0.9
Rated current (100 K)	$I_{N(100K)}$	A	1.6
Static torque (100 K)	$M_{0(100K)}$	Nm	1.3
Stall current (100 K)	$I_{0(100K)}$	A	2.1
Static torque (60 K)	$M_{0(60K)}$	Nm	1.08
Stall current (60 K)	$I_{0(60K)}$	A	1.7
Optimum operating point:			
Optimum speed	n_{opt}	rpm	6000
Optimum power	P_{opt}	kW	0.57
Limit data:			
Max. permissible speed (mech.)	$n_{max\ mech}$	rpm	10000
Maximum torque	M_{max}	Nm	4.3 7.6
Maximum current	I_{max}	A	
Motor data:			
Number of poles	2p		6
Torque constant (100K)	k_T	Nm/A	0.62
Voltage constant (at 20°C)	k_E	V/1000rpm	39.5
Winding resistance (at 20°C)	R_{ph}	Ω	3.51
Rotating field inductance	L_D	mH	22
Electrical time constant	T_{el}	ms	6.3
Mechanical time constant	T_{mech}	ms	0.68
Thermal time constant	T_{th}	min	25
Moment of inertia	J_{Mot}	$10^{-4}\ kgm^2$	0.25
Shaft torsional stiffness	C_t	Nm/rad	7300
Weight	m_{Mot}	kg	3
Motor data with integrated brake:			
Moment of inertia (with brake)	$J_{Mot\ withBr}$	$10^{-4}\ kgm^2$	0.35
Shaft torsional stiffness (with brake)	$C_t\ withBr$	Nm/rad	4700
Weight (with brake)	$m_{Mot\ withBr}$	kg	3.4
Recommended Motor Module:			
Rated converter current	$I_{N\ conv}$	A	3
Maximum converter current	$I_{max\ conv}$	A	9
Max. torque (converter operation)	$M_{max\ conv}$	Nm	4.3
Max. permissible speed (converter operation)	$n_{max\ conv}$	rpm	10000