

1FK7043 - 4CF2 three-phase servomotor			
Technical data	Character	Unit	Value
Configuration data:			
Rated speed	n_N	rpm	3000
Rated torque (100 K)	$M_{N(100K)}$	Nm	3
Rated current (100 K)	$I_{N(100K)}$	A	3.7
Static torque (100 K)	$M_{0(100K)}$	Nm	3.3
Stall current (100 K)	$I_{0(100K)}$	A	3.9
Static torque (60 K)	$M_{0(60K)}$	Nm	2.9
Stall current (60 K)	$I_{0(60K)}$	A	3.3
Optimum operating point:			
Optimum speed	n_{opt}	rpm	3000
Optimum power	P_{opt}	kW	0.94
Limit data:			
Max. permissible speed (mech.) Maximum torque	$n_{max\ mech}$	rpm	9000
	M_{max}	Nm	10
Maximum current	I_{max}	A	12.5
Motor data:			
Number of poles	2p		6
Torque constant (100K)	k_T	Nm/A	0.845
Voltage constant (at 20°C)	k_E	V/1000 rpm	54
Winding resistance (at 20°C)	R_{ph}	W	1.2
Rotating field inductance	L_D	mH	13.6
Electrical time constant	T_{el}	ms	11.3
Mechanical time constant	T_{mech}	ms	0.5
Thermal time constant	T_{th}	min	40
Moment of inertia	J_{Mot}	$kgm^2 \cdot 10^{-4}$	1
Shaft torsional stiffness	C_t	Nm/rad	11400
Weight	m_{Mot}	kg	6
Motor data with integrated brake:			
Moment of inertia (with brake)	$J_{Mot\ withBr}$	$kgm^2 \cdot 10^{-4}$	1.36
Shaft torsional stiffness (with brake)	C_t	Nm/rad	9000
Weight (with brake)	$m_{Mot\ withBr}$	kg	6.6
Data with SINAMICS S120 Booksize / S120 Booksize Compact			
Rated converter current	$I_{N\ conv}$	A	3.9
Maximum converter current	$I_{max\ conv}$	A	7.8
Max. torque (converter operation)	$M_{max\ conv}$	Nm	6.6
Max. permissible speed (converter operation)	$n_{max\ conv}$	rpm	5350