

Data sheet for SIMOTICS S-1FK7



Figure similar

Ordering data 1FK7042-5AK71-1FG0

Client order no. :
Order no. :
Offer no. :
Remarks :

Item no. :
Consignment no. :
Project :

Engineering data		Physical constants	
Rated speed	6000 rpm	Torque constant	0.69 Nm/A
Number of poles	8	Voltage constant at 20° C	44.0 V/1000*min ⁻¹
Rated torque (100 K)	1.5 Nm	Winding resistance at 20° C	1.20 Ω
Rated current	2.5 A	Rotating field inductance	6.7 mH
Static torque (60 K)	2.50 Nm	Electrical time constant	5.60 ms
Static torque (100 K)	3.0 Nm	Mechanical time constant	2.27 ms
Stall current (60 K)	3.6 A	Thermal time constant	30 min
Stall current (100 K)	4.4 A	Shaft torsional stiffness	16000 Nm/rad
Rotor moment of inertia	3.010 kgcm ²	Net weight of the motor	4.9 kg
Efficiency	89.0 %		

Mechanical data			
Motor type	Compact	Electrical connectors	Connectors for signals and power rotatable
Shaft height	48	Color of the housing	unpainted
Cooling	Natural cooling	Holding brake	without holding brake
Radial runout tolerance	0.040 mm	Shaft extension	Plain shaft
Concentricity tolerance	0.08 mm	Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Axial runout tolerance	0.08 mm		
Vibration severity grade	Grade A		
Connector size	1		
Degree of protection	IP64		
Design acc. to Code I	IM B5 (IM V1, IM V3)		
Temperature monitoring	KTY84 temperature sensor in the stator winding		

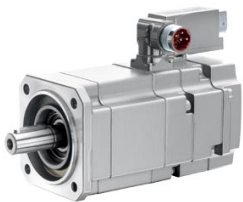


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Optimum operating point		Recommended Motor Module	
Optimum speed	5000 rpm	Rated inverter current	5 A
Optimum power	1.0 kW	Maximum inverter current	10 A
		Maximum torque	6.80 Nm