

Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7085-7AF71-1FH0

No image available for this configuration.

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data	
Rated speed (100 K)	3000 rpm
Number of poles	8
Rated torque (100 K)	6.5 Nm
Rated current	7.0 A
Static torque (60 K)	17.00 Nm
Static torque (100 K)	22.0 Nm
Stall current (60 K)	16.50 A
Stall current (100 K)	22.50 A
Moment of inertia	25.000 kgcm ²
Efficiency	92.0 %

Physical constants	
Torque constant	0.96 Nm/A
Voltage constant at 20° C	63.0 V/1000*min ⁻¹
Winding resistance at 20° C	0.12 Ω
Rotating field inductance	3.3 mH
Electrical time constant	27.50 ms
Mechanical time constant	0.90 ms
Thermal time constant	65 min
Shaft torsional stiffness	83000 Nm/rad
Net weight of the motor	25.7 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	High Dynamic
Shaft height	80
Cooling	Natural cooling
Radial runout tolerance	0.050 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 mm
Vibration severity grade	Grade A
Connector size	1.5
Degree of protection	IP64
Design acc. to Code I	IM B5 (IM V1, IM V3)
Temperature monitoring	KTY84 temperature sensor in the stator winding
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	without
Holding brake	with holding brake
Shaft extension	Plain shaft
Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

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Figure similar

Optimum operating point

Optimum speed 2500 rpm

Optimum power 3.1 kW

Limiting data

Max. permissible speed (mech.) 6000 rpm

Max. permissible speed (inverter) 9100 rpm

Maximum torque 65.0 Nm

Maximum current 80.0 A

Holding brake

Holding brake version Permanent-magnet brake

Holding torque 22.0 Nm

Power supply voltage DC 24 V \pm 10 %

Coil current 0.9 A

Opening time 200 ms

Closing time 60 ms

Highest braking work 1400 J

Recommended Motor Module

Rated inverter current 30 A

Maximum inverter current 56 A

Maximum torque 52.60 Nm