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Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data **1FK7080-2AF71-1TA0**

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)	6.8 Nm
Rated current	4.4 A
Static torque (60 K)	6.60 Nm
Static torque (100 K)	8.0 Nm
Stall current (60 K)	4.00 A
Stall current (100 K)	4.90 A
Moment of inertia	14.200 kgcm²
Efficiency	92.0 %

Physical constants

Torque constant	1.61 Nm/A
Voltage constant at 20° C	105.0 V/1000*min⁻¹
Winding resistance at 20° C	0.98 Ω
Rotating field inductance	17.2 mH
Electrical time constant	17.50 ms
Mechanical time constant	1.52 ms
Thermal time constant	40 min
Shaft torsional stiffness	120000 Nm/rad
Net weight of the motor	10.3 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
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
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	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft extension	Feather key
Encoder system	Resolver 2-pole

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Figure similar

Optimum operating point

Optimum speed	3000 rpm
Optimum power	2.1 kW

Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	5500 rpm
Maximum torque	25.0 Nm
Maximum current	18.0 A

Recommended Motor Module

Rated inverter current	5 A
Maximum inverter current	15 A
Maximum torque	22.10 Nm