

Data sheet for SIMOTICS S-1FK7



Figure similar

Article No. : **1FK7083-2AF71-1CG0-Z
X01**

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

Item no. :
Consignment no. :
Project :

Engineering data

Rated speed (100 K)	3,000 rpm
Number of poles	8
Rated torque (100 K)	10.5 Nm
Rated current	7.2 A
Static torque (60 K)	13.30 Nm
Static torque (100 K)	16.00 Nm
Stall current (60 K)	8.20 A
Stall current (100 K)	10.10 A
Moment of inertia	26.000 kgcm ²
	93.0 %

Physical constants

Torque constant	1.58 Nm/A
Voltage constant at 20° C	102.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.38 Ω
	7.0 mH
Electrical time constant	18.60 ms
Mechanical time constant	1.18 ms
Thermal time constant	50 min
Shaft torsional stiffness	101,000 Nm/rad
Net weight of the motor	15.6 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
	80
Cooling	Natural cooling
	0.050 mm
Concentricity tolerance	0.10 mm
Axial runout tolerance	0.10 mm
	Grade A
Connector size	1
Degree of protection	IP64
	IM B5 (IM V1, IM V3)
Temperature monitoring	Pt1000 temperature sensor
	Connectors for signals and power rotatable
	Jet black, matt RAL 9005

Holding brake	without holding brake
Shaft end	Plain shaft
Encoder system	Encoder AM24DQI: absolute encoder 24 bits (resolution 16777216, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

Optimum operating point

Optimum speed	3,000 rpm
Optimum power	3.3 kW

Limiting data

Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	5,600 rpm
Maximum torque	50.0 Nm
Maximum current	37.0 A

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	40.00 Nm

Special design

X01 Paint finish: Jet black, matt RAL 9005