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Data sheet for SIMOTICS S-1FK7

Figure similar

MLFB-Ordering data **1FK7060-2AH71-1RB0-Z**
M39+Q31

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

Item no. :
Consignment no. :
Project :

Engineering data

Rated speed (100 K)	4500 rpm
Number of poles	8
Rated torque (100 K)	3.7 Nm
Rated current	4.3 A
Static torque (60 K)	5.00 Nm
Static torque (100 K)	6.0 Nm
Stall current (60 K)	5.10 A
Stall current (100 K)	6.30 A
Moment of inertia	8.700 kgcm²
Efficiency	90.0 %

Physical constants

Torque constant	0.95 Nm/A
Voltage constant at 20° C	60.5 V/1000*min⁻¹
Winding resistance at 20° C	0.69 Ω
Rotating field inductance	7.6 mH
Electrical time constant	10.90 ms
Mechanical time constant	1.78 ms
Thermal time constant	30 min
Shaft torsional stiffness	28500 Nm/rad
Net weight of the motor	8.5 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.040 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	Pt1000 temperature sensor
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	Standard (Anthracite RAL 7016)
Holding brake	with holding brake
Shaft end	Feather key
Encoder system	Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

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Optimum operating point

Optimum speed	4500 rpm
Optimum power	1.7 kW

Limiting data

Max. permissible speed (mech.)	4500 rpm
Max. permissible speed (inverter)	7200 rpm
Maximum torque	18.0 Nm
Maximum current	21.5 A

Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	13.0 Nm
Power supply voltage	DC 24 V ± 10 %
Coil current	0.8 A
Opening time	100 ms
Closing time	50 ms
Highest braking work	380 J

Recommended Motor Module

Rated inverter current	9 A
Maximum inverter current	27 A
Maximum torque	18.00 Nm

Special design

M39	Version for Zone 22 hazardous areas according to EN 50281/IEC 61241
Q31	Metal rating plate on the motor