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Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data **1FK7084-2AF71-1FG1**

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)	10.0 Nm
Rated current	6.5 A
Static torque (60 K)	16.60 Nm
Static torque (100 K)	20.0 Nm
Stall current (60 K)	9.80 A
Stall current (100 K)	12.10 A
Moment of inertia	32.500 kgcm²
Efficiency	93.0 %

Physical constants

Torque constant	1.66 Nm/A
Voltage constant at 20° C	106.5 V/1000*min⁻¹
Winding resistance at 20° C	0.28 Ω
Rotating field inductance	5.9 mH
Electrical time constant	21.00 ms
Mechanical time constant	1.01 ms
Thermal time constant	55 min
Shaft torsional stiffness	93000 Nm/rad
Net weight of the motor	18.3 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	IP65
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	without holding brake
Shaft end	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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No image available for this configuration.

Figure similar

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Optimum operating point

Optimum speed	2500 rpm
Optimum power	3.2 kW

Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	5400 rpm
Maximum torque	61.0 Nm
Maximum current	41.0 A

Recommended Motor Module

Rated inverter current	18 A
Maximum inverter current	54 A
Maximum torque	61.00 Nm