

## Data sheet for SIMOTICS S-1FK7

MLFB-Ordering data

1FK7101-5AF71-1DA3

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)	15.5 Nm
Rated current	11.8 A
Static torque (60 K)	22.40 Nm
Static torque (100 K)	27.0 Nm
Stall current (60 K)	15.70 A
Stall current (100 K)	19.00 A
Moment of inertia	79.900 kgcm <sup>2</sup>
Efficiency	93.0 %

### Physical constants

Torque constant	1.41 Nm/A
Voltage constant at 20° C	90.0 V/1000*min <sup>-1</sup>
Winding resistance at 20° C	0.15 Ω
Rotating field inductance	3.0 mH
Electrical time constant	20.00 ms
Mechanical time constant	1.80 ms
Thermal time constant	60 min
Shaft torsional stiffness	165000 Nm/rad
Net weight of the motor	21.0 kg

### Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
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	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft extension	Feather key
Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits

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Figure similar

## Optimum operating point

Optimum speed 3000 rpm

Optimum power 4.9 kW

## Limiting data

Max. permissible speed (mech.) 5000 rpm

Max. permissible speed (inverter) 6400 rpm

Maximum torque 80.0 Nm

Maximum current 63.0 A

## Recommended Motor Module

Rated inverter current 18 A

Maximum inverter current 36 A

Maximum torque 51.00 Nm