

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7080-2AF74-1TG1

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) 8.00 Nm

Stall current (60 K) 4.00 A

Stall current (100 K) 4.90 A

Moment of inertia 14.200 kgcm<sup>2</sup>

Efficiency 92.0 %

### Physical constants

Torque constant 1.61 Nm/A

Voltage constant at 20° C 105.0 V/1000\*min<sup>-1</sup>

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 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 Resolver 2-pole



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| Optimum operating point           |          | Recommended Motor Module |          |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed                     | 3000 rpm | Rated inverter current   | 5 A      |
| Optimum power                     | 2.1 kW   | Maximum inverter current | 15 A     |
| Limiting data                     |          | Maximum torque           | 22.10 Nm |
| Max. permissible speed (mech.)    | 6000 rpm |                          |          |
| Max. permissible speed (inverter) | 5500 rpm |                          |          |
| Maximum torque                    | 25.0 Nm  |                          |          |
| Maximum current                   | 18.0 A   |                          |          |