

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7063-2AF71-1QA0

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

Item no. :  
Consignment no. :  
Project :

| Engineering data        |                          | Physical constants          |                               |
|-------------------------|--------------------------|-----------------------------|-------------------------------|
| Rated speed             | 3000 rpm                 | Torque constant             | 1.37 Nm/A                     |
| Number of poles         | 8                        | Voltage constant at 20° C   | 90.5 V/1000*min <sup>-1</sup> |
| Rated torque (100 K)    | 7.3 Nm                   | Winding resistance at 20° C | 0.64 Ω                        |
| Rated current           | 5.6 A                    | Rotating field inductance   | 8.5 mH                        |
| Static torque (60 K)    | 9.10 Nm                  | Electrical time constant    | 13.40 ms                      |
| Static torque (100 K)   | 11.0 Nm                  | Mechanical time constant    | 1.48 ms                       |
| Stall current (60 K)    | 6.5 A                    | Thermal time constant       | 40 min                        |
| Stall current (100 K)   | 8.0 A                    | Shaft torsional stiffness   | 34000 Nm/rad                  |
| Rotor moment of inertia | 14.700 kgcm <sup>2</sup> | Net weight of the motor     | 11.1 kg                       |
| Efficiency              | 91.0 %                   |                             |                               |

| Mechanical data          |                                                |                       |                                                       |
|--------------------------|------------------------------------------------|-----------------------|-------------------------------------------------------|
| Motor type               | Compact                                        | Electrical connectors | Connectors for signals and power rotatable            |
| Shaft height             | 63                                             | Color of the housing  | Standard painting (Anthracite RAL 7016)               |
| Cooling                  | Natural cooling                                | Holding brake         | without holding brake                                 |
| Radial runout tolerance  | 0.040 mm                                       | Shaft extension       | Feather key                                           |
| Concentricity tolerance  | 0.10 mm                                        | Encoder system        | Encoder AS20DQI: absolute encoder single-turn 20 bits |
| 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   | KTY84 temperature sensor in the stator winding |                       |                                                       |



Figure similar

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| Optimum operating point        |          | Recommended Motor Module |          |
|--------------------------------|----------|--------------------------|----------|
| Optimum speed                  | 3000 rpm | Rated inverter current   | 9 A      |
| Optimum power                  | 2.3 kW   | Maximum inverter current | 18 A     |
| Limiting data                  |          | Maximum torque           | 24.30 Nm |
| Max. permissible speed (mech.) | 6400 rpm |                          |          |