

Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data                      1FK7060-2AC71-1RA0

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

Item no. :  
Consignment no. :  
Project :

| Engineering data            |                                | Mechanical data          |                                                                                                                                                   |
|-----------------------------|--------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated speed (100 K)         | 2000 rpm                       | Motor type               | Permanent-magnet synchronous motor                                                                                                                |
| Number of poles             | 8                              | Motor type               | Compact                                                                                                                                           |
| Rated torque (100 K)        | 5.3 Nm                         | Shaft height             | 63                                                                                                                                                |
| Rated current               | 3.0 A                          | Cooling                  | Natural cooling                                                                                                                                   |
| Static torque (60 K)        | 5.00 Nm                        | Radial runout tolerance  | 0.040 mm                                                                                                                                          |
| Static torque (100 K)       | 6.0 Nm                         | Concentricity tolerance  | 0.10 mm                                                                                                                                           |
| Stall current (60 K)        | 2.55 A                         | Axial runout tolerance   | 0.10 mm                                                                                                                                           |
| Stall current (100 K)       | 3.15 A                         | Vibration severity grade | Grade A                                                                                                                                           |
| Moment of inertia           | 7.700 kgcm <sup>2</sup>        | Connector size           | 1                                                                                                                                                 |
| Efficiency                  | 90.0 %                         | Degree of protection     | IP64                                                                                                                                              |
| Physical constants          |                                | Design acc. to Code I    | IM B5 (IM V1, IM V3)                                                                                                                              |
| Torque constant             | 1.91 Nm/A                      | Temperature monitoring   | Pt1000 temperature sensor                                                                                                                         |
| Voltage constant at 20° C   | 121.0 V/1000*min <sup>-1</sup> | Electrical connectors    | Connectors for signals and power rotatable                                                                                                        |
| Winding resistance at 20° C | 2.75 Ω                         | Color of the housing     | Standard (Anthracite RAL 7016)                                                                                                                    |
| Rotating field inductance   | 30.5 mH                        | Holding brake            | without holding brake                                                                                                                             |
| Electrical time constant    | 11.10 ms                       | Shaft extension          | Feather key                                                                                                                                       |
| Mechanical time constant    | 1.75 ms                        | Encoder system           | Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |
| Thermal time constant       | 30 min                         |                          |                                                                                                                                                   |
| Shaft torsional stiffness   | 40500 Nm/rad                   |                          |                                                                                                                                                   |
| Net weight of the motor     | 7.1 kg                         |                          |                                                                                                                                                   |



Figure similar

MLFB-Ordering data                      1FK7060-2AC71-1RA0

| Optimum operating point           |          | Recommended Motor Module |          |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed                     | 2000 rpm | Rated inverter current   | 3 A      |
| Optimum power                     | 1.1 kW   | Maximum inverter current | 9 A      |
| Limiting data                     |          | Maximum torque           | 15.90 Nm |
| Max. permissible speed (mech.)    | 7200 rpm |                          |          |
| Max. permissible speed (inverter) | 4750 rpm |                          |          |
| Maximum torque                    | 18.0 Nm  |                          |          |
| Maximum current                   | 10.7 A   |                          |          |