

## Data sheet for SIMOTICS S-1FK7



Figure similar

MLFB-Ordering data

1FK7062-2AH71-1DA1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Engineering data   |                          | Mechanical data             |                                    |                        |  |
|--|--------------------------|-----------------------------|------------------------------------|------------------------|--|
| Rated speed (100 K)  | 4500 rpm                 | Motor type                  | Permanent-magnet synchronous motor |                        |  |
| Number of poles  | 8                        | Motor type                  | Compact                            |                        |  |
| Rated torque (100 K)   | 3.0 Nm                   | Shaft height                | 63                                 |                        |  |
| Rated current  | 3.3 A                    | Cooling                     | Natural cooling                    |                        |  |
| Static torque (60 K)   | 7.10 Nm                  | Radial runout tolerance     | 0.040 mm                           |                        |  |
| Static torque (100 K)  | 8.5 Nm                   | Concentricity tolerance     | 0.10 mm                            |                        |  |
| Stall current (60 K)   | 6.50 A                   | Axial runout tolerance      | 0.10 mm                            |                        |  |
| Stall current (100 K)  | 8.00 A                   | Vibration severity grade    | Grade A                            |                        |  |
| Moment of inertia  | 11.200 kgcm <sup>2</sup> | Connector size              | 1                                  |                        |  |
| Efficiency   | 91.0 %                   | Degree of protection        | IP65                               |                        |  |
| <th colspan="2">Physical constants</th> <td>Design acc. to Code I</td> <td>IM B5 (IM V1, IM V3)</td> |                          | Physical constants          |                                    | Design acc. to Code I  | IM B5 (IM V1, IM V3)   |
|  |                          | Torque constant             | 1.06 Nm/A                          | Temperature monitoring | Pt1000 temperature sensor  |
|  |                          | Voltage constant at 20° C   | 67.5 V/1000*min <sup>-1</sup>      | Electrical connectors  | Connectors for signals and power rotatable   |
|  |                          | Winding resistance at 20° C | 0.48 Ω                             | Color of the housing   | Standard (Anthracite RAL 7016)   |
|  |                          | Rotating field inductance   | 6.4 mH                             | Holding brake          | without holding brake  |
|  |                          | Electrical time constant    | 13.20 ms                           | Shaft extension        | Feather key  |
|  |                          | Mechanical time constant    | 1.44 ms                            | Encoder system         | Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits |
|  |                          | Thermal time constant       | 35 min                             |                        |  |
|  |                          | Shaft torsional stiffness   | 37000 Nm/rad                       |                        |  |
|  |                          | Net weight of the motor     | 9.1 kg                             |                        |  |



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### Optimum operating point

|               |          |
|---------------|----------|
| Optimum speed | 3500 rpm |
| Optimum power | 1.9 kW   |

### Limiting data

|                                   |          |
|-----------------------------------|----------|
| Max. permissible speed (mech.)    | 7200 rpm |
| Max. permissible speed (inverter) | 7200 rpm |
| Maximum torque                    | 26.0 Nm  |
| Maximum current                   | 29.0 A   |

### Recommended Motor Module

|                          |          |
|--------------------------|----------|
| Rated inverter current   | 9 A      |
| Maximum inverter current | 27 A     |
| Maximum torque           | 24.80 Nm |