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# Data sheet for SIMOTICS S-1FK7

**MLFB-Ordering data** **1FK7034-2AF21-1UH2**



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 | 6 |
| Rated torque (100 K) | 1.4 Nm |
| Rated current | 1.8 A |
| Static torque (60 K) | 1.35 Nm |
| Static torque (100 K) | 1.60 Nm |
| Stall current (60 K) | 1.55 A |
| Stall current (100 K) | 1.90 A |
| Moment of inertia | 1.000 kgcm² |
| Efficiency | 85.0 % |

## Physical constants

| | |
|---|---|
| Torque constant | 0.84 Nm/A |
| Voltage constant at 20° C | 55.0 V/1000*min⁻¹ |
| Winding resistance at 20° C | 4.46 Ω |
| Rotating field inductance | 17.2 mH |
| Electrical time constant | 3.85 ms |
| Mechanical time constant | 1.71 ms |
| Thermal time constant | 30 min |
| Shaft torsional stiffness | 3750 Nm/rad |
| Net weight of the motor | 3.9 kg |

## Mechanical data

| | |
|---|---|
| Motor type | Permanent-magnet synchronous motor |
| Motor type | Compact |
| Shaft height | 36 |
| Cooling | Natural cooling |
| Radial runout tolerance | 0.035 mm |
| Concentricity tolerance | 0.08 mm |
| Axial runout tolerance | 0.08 mm |
| Vibration severity grade | Grade A |
| Connector size | 1 |
| Degree of protection | IP65 and DE flange IP67 |
| 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 | with holding brake |
| Shaft end | Plain shaft |
| Encoder system | Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole) |

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Figure similar

## Optimum operating point

| | |
|---|---|
| Optimum speed | 3000 rpm |
| Optimum power | 0.5 kW |

## Limiting data

| | |
|---|---|
| Max. permissible speed (mech.) | 10000 rpm |
| Max. permissible speed (inverter) | 5200 rpm |
| Maximum torque | 6.5 Nm |
| Maximum current | 8.0 A |

## Holding brake

| | |
|---|---|
| Holding brake version | Permanent-magnet brake |
| Holding torque | 1.9 Nm |
| Power supply voltage | DC 24 V ± 10 % |
| Coil current | 0.3 A |
| Opening time | 50 ms |
| Closing time | 30 ms |
| Highest braking work | 40 J |

## Recommended Motor Module

| | |
|---|---|
| Rated inverter current | 2 A |
| Maximum inverter current | 5 A |
| Maximum torque | 3.90 Nm |