



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7034-5AK74-1NA2-Z  
Q12

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

Item no. :  
Consignment no. :  
Project :

| Engineering data        |            |
|-------------------------|------------|
| Rated speed             | 6,000 rpm  |
| Number of poles         | 6          |
| Rated torque (100 K)    | 1.4 Nm     |
| Rated current           | 2.10 A     |
| Static torque (60 K)    | 1.6 Nm     |
| Static torque (100 K)   | 2.0 Nm     |
| Stall current (60 K)    | 2.10 A     |
| Stall current (100 K)   | 2.70 A     |
| Rotor moment of inertia | 0.85 kgcm² |
| Efficiency              | 90.0 %     |

| Physical constants          |                               |
|-----------------------------|-------------------------------|
| Torque constant             | 0.76 Nm/A                     |
| Voltage constant at 20° C   | 48.5 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 2.40 Ω                        |
| Rotary field inductance     | 9.7 mH                        |
| Electrical time constant    | 4.00 ms                       |
| Mechanical time constant    | 1.10 ms                       |
| Thermal time constant       | 25 min                        |
| Shaft torsional stiffness   | 5,100 Nm/rad                  |
| Net weight of the motor     | 3.8 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  | 0.080 mm                                                                         |
| Axial runout tolerance   | 0.080 mm                                                                         |
| Vibration severity grade | Grade A                                                                          |
| Degree of protection     | IP67                                                                             |
| Design acc. to Code I    | IM B5 (compatible with 1FT6)                                                     |
| Temperature monitoring   | Pt1000 temperature sensor                                                        |
| Color of the housing     | Standard (pearl dark gray similar to RAL 9023)                                   |
| Shaft end type           | Fitted key and keyway                                                            |
| Sensor design            | Encoder IC2048S/R; incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track |
| Electrical connection    | Connector turnable                                                               |
| Connector size           | 1                                                                                |

| Optimum operating point |           |
|-------------------------|-----------|
| Optimum speed           | 6,000 rpm |
| Optimum power           | 0.9 kW    |

| Limiting data                     |            |
|-----------------------------------|------------|
| Max. permissible speed (mech.)    | 10,000 rpm |
| Max. permissible speed (inverter) | 10,000 rpm |
| Maximum torque                    | 8.0 Nm     |
| Maximum current                   | 12.00 A    |

| Recommended Motor Module |        |
|--------------------------|--------|
| Rated inverter current   | 3.00 A |
| Maximum inverter current | 9.00 A |
| Maximum torque           | 6.3 Nm |

| Special design |                        |
|----------------|------------------------|
| Q12            | Sealing air connection |