

Data sheet for SIMOTICS S-1FT7

Article No. : **1FT7034-5AK71-1FH1-Z**
J22



Figure similar

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	1.20 kgcm ²
Efficiency	90.0 %

Physical constants	
Torque constant	0.76 Nm/A
Voltage constant at 20° C	48.5 V/1000*min ⁻¹
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	3,650 Nm/rad
Net weight of the motor	6.1 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	IP65
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	Plain shaft
Sensor design	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
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

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	3.0 Nm
Braking torque	1.5 Nm
Power supply voltage	DC 24 V
Coil current	0.30 A
Permissible brake work	30 J
Opening time	60 ms
Closing time	25 ms

Gearbox data	
Gearbox type	Planetary gearbox
Designation	SP 060S-MF1
Gearbox ratio	4
Motor speed S3-60 %	7,500 rpm
Motor speed S1	3,300 rpm
Output torque S1	27.0 Nm
Rated output torque at duty type S3-60 %	50.0 Nm
Moment of inertia of gearbox	0.22 kgcm ²
Radial output shaft loading, max.	2,800 N
Axial output shaft load, max.	2,400 N
Efficiency of gearbox	0.97
Torsional backlash	4 '
Gearbox weight	1.90 kg

Special design	
J22	Mounting of SP+ planetary gearbox