

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7044-5AF71-0LG1-Z
J09+L03



Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	3,000 rpm
Number of poles	6
Rated torque (100 K)	4.3 Nm
Rated current	2.60 A
Static torque (60 K)	4.4 Nm
Static torque (100 K)	5.0 Nm
Stall current (60 K)	2.50 A
Stall current (100 K)	2.80 A
Rotor moment of inertia	5.97 kgcm ²
Efficiency	92.0 %

Physical constants	
Torque constant	1.74 Nm/A
Voltage constant at 20° C	110.5 V/1000*min ⁻¹
Winding resistance at 20° C	2.35 Ω
Rotary field inductance	15.0 mH
Electrical time constant	6.40 ms
Mechanical time constant	1.30 ms
Thermal time constant	35 min
Shaft torsional stiffness	12,300 Nm/rad
Net weight of the motor	11.1 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	48
Cooling	Natural cooling
Radial runout tolerance	0.040 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 AM24DQI: Absolute encoder 24 bit (resolution 16777216, encoder-internal 2048 S/R) + 12 bit Multiturn (traversing range 4096 revolutions) - with signal connection via M17 rotary plug
Electrical connection	Transverse facing to right site
Connector size	1

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	1.4 kW

Limiting data	
Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	5,200 rpm
Maximum torque	23.0 Nm
Maximum current	16.00 A

Recommended Motor Module	
Rated inverter current	3.00 A
Maximum inverter current	9.00 A
Maximum torque	14.8 Nm

Gearbox data	
Gearbox type	Planetary gearbox
Designation	SP 075S-MF1
Gearbox ratio	10
Motor speed S3-60 %	7,500 rpm
Motor speed S1	3,100 rpm
Output torque S1	81.0 Nm
Rated output torque at duty type S3-60 %	114.0 Nm
Moment of inertia of gearbox	0.54 kgcm ²
Radial output shaft loading, max.	4,200 N
Axial output shaft load, max.	3,350 N
Efficiency of gearbox	0.97
Torsional backlash	4 '
Gearbox weight	3.90 kg

Special design	
J09	Mounting of SP+ planetary gearbox
L03	Version for increased vibration stress