

Data sheet for SIMOTICS S-1FT7

Article No. : **1FT7132-5SF71-8BG1-Z**
J09



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	8
Rated torque (100 K)	113.0 Nm
Rated current	69.00 A
Static torque (60 K)	120.0 Nm
Static torque (100 K)	140.0 Nm
Stall current (60 K)	72.00 A
Stall current (100 K)	85.00 A
Rotor moment of inertia	512.10 kgcm ²
Efficiency	95.0 %

Physical constants

Torque constant	1.69 Nm/A
Voltage constant at 20° C	116.0 V/1000*min ⁻¹
Winding resistance at 20° C	0.04 Ω
Rotary field inductance	1.2 mH
Electrical time constant	28.00 ms
Mechanical time constant	2.10 ms
Thermal time constant	20 min
Shaft torsional stiffness	347,000 Nm/rad
Net weight of the motor	137.0 kg

Mechanical data

Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	132
Cooling	Forced ventilation
Radial runout tolerance	0.050 mm
Concentricity tolerance	0.125 mm
Axial runout tolerance	0.125 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
Shaft end type	Plain shaft
Sensor design	Encoder AS24DQI: Absolut encoder Singleturn 24 bit - with signal connection RJ45
Electrical connection	Terminal box axial DE

Optimum operating point

Optimum speed	3,000 rpm
Optimum power	35.5 kW

Limiting data

Max. permissible speed (mech.)	3,600 rpm
Max. permissible speed (inverter)	3,600 rpm
Maximum torque	305.0 Nm
Maximum current	210.00 A

Recommended Motor Module

Rated inverter current	85.00 A
Maximum inverter current	141.00 A
Maximum torque	220.0 Nm

Gearbox data

Gearbox type	Planetary gearbox
Designation	SP 210S-MF1
Gearbox ratio	10
Motor speed S3-60 %	3,000 rpm
Motor speed S1	2,000 rpm
Output torque S1	1,708.0 Nm
Rated output torque at duty type S3-60 %	2,280.0 Nm
Moment of inertia of gearbox	53.10 kgcm ²
Radial output shaft loading, max.	21,000 N
Axial output shaft load, max.	30,000 N
Efficiency of gearbox	0.97
Torsional backlash	3'
Gearbox weight	56.00 kg

Special design

J09 Mounting of SP+ planetary gearbox