

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7062-5AF71-1CG1-Z
J29

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

Item no. :
Consignment no. :
Project :



Figure similar

Engineering data	
Rated speed	3,000 rpm
Number of poles	10
Rated torque (100 K)	5.4 Nm
Rated current	3.90 A
Static torque (60 K)	5.0 Nm
Static torque (100 K)	6.0 Nm
Stall current (60 K)	3.40 A
Stall current (100 K)	3.90 A
Rotor moment of inertia	9.43 kgcm ²
Efficiency	91.0 %

Physical constants	
Torque constant	1.49 Nm/A
Voltage constant at 20° C	94.5 V/1000*min ⁻¹
Winding resistance at 20° C	1.57 Ω
Rotary field inductance	15.2 mH
Electrical time constant	10.00 ms
Mechanical time constant	1.60 ms
Thermal time constant	25 min
Shaft torsional stiffness	28,500 Nm/rad
Net weight of the motor	14.8 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	63
Cooling	Natural cooling
Radial runout tolerance	0.040 mm
Concentricity tolerance	0.100 mm
Axial runout tolerance	0.100 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 RJ45
Electrical connection	Connector turnable
Connector size	1

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	1.7 kW

Limiting data	
Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	6,100 rpm
Maximum torque	24.0 Nm
Maximum current	22.00 A

Recommended Motor Module	
Rated inverter current	5.00 A
Maximum inverter current	15.00 A
Maximum torque	18.7 Nm

Gearbox data	
Gearbox type	Planetary gearbox
Designation	SP 100S-MF1
Gearbox ratio	10
Motor speed S3-60 %	5,500 rpm
Motor speed S1	2,800 rpm
Output torque S1	174.0 Nm
Rated output torque at duty type S3-60 %	282.0 Nm
Moment of inertia of gearbox	2.07 kgcm ²
Radial output shaft loading, max.	6,600 N
Axial output shaft load, max.	5,650 N
Efficiency of gearbox	0.97
Torsional backlash	3 '
Gearbox weight	7.70 kg

Special design	
J29	Mounting of SP+ planetary gearbox