



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7044-5AF71-1NG1-Z
J02

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	6.21 kgcm²
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	9,500 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	KTY84 temperature sensor in the stator winding
Color of the housing	Standard (pearl dark gray similar to RAL 9023)
Shaft end type	Plain shaft
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	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	4
Motor speed S3-60 %	7,500 rpm
Motor speed S1	2,900 rpm
Output torque S1	81.0 Nm
Rated output torque at duty type S3-60 %	132.0 Nm
Moment of inertia of gearbox	0.78 kgcm²
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	
J02	Mounting of SP+ planetary gearbox