SIEMENS



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7108-5SC71-1CG1-Z
J09

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	2,000 rpm
Number of poles	10
Rated torque (100 K)	73.0 Nm
Rated current	33.00 A
Static torque (60 K)	74.0 Nm
Static torque (100 K)	91.0 Nm
Stall current (60 K)	32.00 A
Stall current (100 K)	39.00 A
Rotor moment of inertia	301.10 kgcm²
Efficiency	93.0 %

Physical constants	
Torque constant	2.32 Nm/A
Voltage constant at 20° C	148.0 V/1000*min^{-1}
Winding resistance at 20° C	0.09 Ω
Rotary field inductance	2.4 mH
Electrical time constant	28.00 ms
Mechanical time constant	1.20 ms
Thermal time constant	60 min
Shaft torsional stiffness	126,000 Nm/rad
Net weight of the motor	120.0 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
Cooling	Forced ventilation
Radial runout tolerance	0.050 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
Safety Integrated - Suitable encoder	Yes
Electrical connection	Connector turnable
Connector size	1.5

Optimum operating point	
Optimum speed	2,000 rpm
Optimum power	15.3 kW

Limiting data	
Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	3,900 rpm
Maximum torque	280.0 Nm
Maximum current	142.00 A

Recommended Motor Module	
Rated inverter current	45.00 A
Maximum inverter current	85.00 A
Maximum torque	190.0 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 kgcm²
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

Subject to change. Calculated values may differ from nameplate ratings. © Copyright Siemens