

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7108-5SC71-1MG1

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

Item no. :
Consignment no. :
Project :



Figure similar

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	248.00 kgcm ²
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	96,000 Nm/rad
Net weight of the motor	64.0 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	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 AM2048S/R: absolute encoder 2048 S/R, 4096 revolutions multi-turn, with EnDat interface
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