

Data sheet for SIMOTICS S-1FT7

Article No. : 1FT7105-5AC71-1MB0-Z
N05

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)	38.0 Nm
Rated current	15.00 A
Static torque (60 K)	41.0 Nm
Static torque (100 K)	50.0 Nm
Stall current (60 K)	15.00 A
Stall current (100 K)	18.00 A
Rotor moment of inertia	206.00 kgcm ²
Efficiency	93.0 %

Physical constants	
Torque constant	2.68 Nm/A
Voltage constant at 20° C	170.5 V/1000*min ⁻¹
Winding resistance at 20° C	0.16 Ω
Rotary field inductance	4.3 mH
Electrical time constant	27.00 ms
Mechanical time constant	1.00 ms
Thermal time constant	80 min
Shaft torsional stiffness	107,000 Nm/rad
Net weight of the motor	50.4 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
Cooling	Natural cooling
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	IP64
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	Fitted key and keyway
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	8.0 kW

Limiting data	
Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	3,350 rpm
Maximum torque	200.0 Nm
Maximum current	84.00 A

Recommended Motor Module	
Rated inverter current	18.00 A
Maximum inverter current	54.00 A
Maximum torque	135.0 Nm

Holding brake	
Holding brake version	Permanent-magnet brake
Holding torque	85.0 Nm
Braking torque	35.0 Nm
Power supply voltage	DC 24 V
Coil current	1.60 A
Permissible brake work	5,300 J
Opening time	250 ms
Closing time	70 ms

Special design	
N05	Non-standard shaft extension (dimensions as for 1FT5 motors)