SIEMENS

Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : **1FT7042-5AK70-1NA1**

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	6,000 rpm
Number of poles	6
Rated torque (100 K)	2.0 Nm
Rated current	3.00 A
Static torque (60 K)	2.4 Nm
Static torque (100 K)	3.0 Nm
Stall current (60 K)	3.10 A
Stall current (100 K)	3.90 A
Rotor moment of inertia	2.81 kgcm²
Efficiency	91.0 %

Physical constants	
Torque constant	0.77 Nm/A
Voltage constant at 20° C	48.6 V/1000*min^{-1}
Winding resistance at 20° C	1.11 Ω
Rotary field inductance	6.5 mH
Electrical time constant	6.00 ms
Mechanical time constant	1.60 ms
Thermal time constant	20 min
Shaft torsional stiffness	11,700 Nm/rad
Net weight of the motor	4.6 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 (new flange design)
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 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	6,000 rpm
Optimum power	1.3 kW

Limiting data	
Max. permissible speed (mech.)	9,000 rpm
Max. permissible speed (inverter)	9,000 rpm
Maximum torque	13.0 Nm
Maximum current	21.00 A

Recommended Motor Module	
Rated inverter current	5.00 A
Maximum inverter current	15.00 A
Maximum torque	10.4 Nm