SIEMENS



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : **1FT7105-5AF70-1FH1**

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

Item no. :
Consignment no. :
Project :

Engineering data	
Rated speed	3,000 rpm
Number of poles	10
Rated torque (100 K)	28.0 Nm
Rated current	15.00 A
Static torque (60 K)	41.0 Nm
Static torque (100 K)	50.0 Nm
Stall current (60 K)	21.00 A
Stall current (100 K)	26.00 A
Rotor moment of inertia	206.00 kgcm²
Efficiency	94.0 %

Physical constants	
Torque constant	1.92 Nm/A
Voltage constant at 20° C	123.5 V/1000*min^{-1}
Winding resistance at 20° C	0.08 Ω
Rotary field inductance	2.3 mH
Electrical time constant	27.00 ms
Mechanical time constant	1.20 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	IP65
Design acc. to Code I	IM B5 (new flange design)
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 AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Electrical connection	Connector turnable
Connector size	1.5

Optimum operating point	
Optimum speed	3,000 rpm
Optimum power	8.8 kW

Limiting data	
Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	4,630 rpm
Maximum torque	200.0 Nm
Maximum current	116.00 A

Recommended Motor Module	
Rated inverter current	30.00 A
Maximum inverter current	90.00 A
Maximum torque	157.0 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

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