SIEMENS



Figure similar

Data sheet for SIMOTICS S-1FT7

Article No. : **1FT7105-5WC70-1DK3**

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)	90.0 Nm
Rated current	40.78 A
Static torque (60 K)	72.0 Nm
Static torque (100 K)	90.0 Nm
Stall current (60 K)	31.90 A
Stall current (100 K)	39.00 A
Rotor moment of inertia	191.00 kgcm²
Efficiency	94.0 %

Physical constants	
Torque constant	2.26 Nm/A
Voltage constant at 20° C	142.5 V/1000*min^{-1}
Winding resistance at 20° C	0.08 Ω
Rotary field inductance	1.9 mH
Electrical time constant	23.00 ms
Mechanical time constant	0.90 ms
Thermal time constant	2 min
Shaft torsional stiffness	146,000 Nm/rad
Net weight of the motor	54.8 kg

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	100
Cooling	Water cooling
Radial runout tolerance	0.025 mm
Concentricity tolerance	0.050 mm
Axial runout tolerance	0.050 mm
Vibration severity grade	Grade R
Degree of protection	IP64
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 IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Electrical connection	Connector turnable
Connector size	1.5

Optimum operating point	
Optimum speed	2,000 rpm
Optimum power	18.8 kW

Limiting data	
Max. permissible speed (mech.)	6,000 rpm
Max. permissible speed (inverter)	4,100 rpm
Maximum torque	230.0 Nm
Maximum current	120.50 A

Recommended Motor Module	
Rated inverter current	45.00 A
Maximum inverter current	85.00 A
Maximum torque	167.5 Nm

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