

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7105-5WC70-1DA0



Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed	2000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	10	Design of the motor type	Compact
Rated torque (100 K)	90.0 Nm	Shaft height	100 mm
Rated current	40.8 A	Cooling	Water cooling
Static torque (60 K)	72.00 Nm	Radial runout tolerance	N
Static torque (100 K)	90.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	31.9 A	Degree of protection	IP64
Stall current (100 K)	39.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0191000 kgm ²	Temperature monitoring	Pt1000 temperature sensor
Efficiency	94.0 %	Color of the housing	Standard (pearl dark gray similar to RAL 9023)
Physical constants		Holding brake version	no value
Torque constant	2.26 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	142.5 V/1000*min ⁻¹	Sensor design	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits
Winding resistance at 20° C	0.08 Ω	Electrical connectors	Connector turnable
Rotating field inductance	1.9 mH	Connector size	1.5
Electrical time constant	23.00 ms		
Mechanical time constant	0.90 ms		
Thermal time constant	2 min		
Shaft torsional stiffness	107000 Nm/rad		
Net weight of the motor	54.8 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	2000 rpm	Rated inverter current	45 A
Optimum power	18.8 kW	Maximum inverter current	85 A
Limiting data		Maximum torque	167.50 Nm
Max. permissible speed (mech.)	6000 rpm		
Max. permissible speed (inverter)	4100 rpm		
Maximum torque	230.0 Nm		
Maximum current	120.5 A		