

Data sheet for SIMOTICS S-1FT7

MLFB-Ordering data

1FT7085-7WH70-1DA1



Figure similar

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

Item no. :
Consignment no. :
Project :

Engineering data		Mechanical data	
Rated speed	4500 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Design of the motor type	High Dynamic
Rated torque (100 K)	33.0 Nm	Shaft height	80 mm
Rated current	48.0 A	Cooling	Water cooling
Static torque (60 K)	34.00 Nm	Radial runout tolerance	N
Static torque (100 K)	43.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	46.0 A	Degree of protection	IP65
Stall current (100 K)	58.0 A	Design acc. to Code I	IM B5 (new flange design)
Rotor moment of inertia	0.0020700 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	0.74 Nm/A	Shaft end type	Fitted key and keyway
Voltage constant at 20° C	47.5 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	0.05 Ω	Electrical connectors	Transverse facing to right site
Rotating field inductance	1.2 mH	Connector size	3
Electrical time constant	26.00 ms		
Mechanical time constant	0.50 ms		
Thermal time constant	10 min		
Shaft torsional stiffness	51000 Nm/rad		
Net weight of the motor	32.0 kg		

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Optimum operating point		Recommended Motor Module	
Optimum speed	4500 rpm	Rated inverter current	60 A
Optimum power	15.5 kW	Maximum inverter current	113 A
Limiting data		Maximum torque	77.00 Nm
Max. permissible speed (mech.)	8000 rpm		
Max. permissible speed (inverter)	8000 rpm		
Maximum torque	105.0 Nm		
Maximum current	205.0 A		