

## Data sheet for SIMOTICS S-1FT7



Figure similar

MLFB-Ordering data

1FT7068-5AF71-1FH1-Z  
J13

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	10	Design of the motor type	Compact
Rated torque (100 K)	10.9 Nm	Shaft height	63 mm
Rated current	6.7 A	Cooling	Natural cooling
Static torque (60 K)	13.00 Nm	Radial runout tolerance	N
Static torque (100 K)	15.0 Nm	Vibration severity grade	Grade A
Stall current (60 K)	7.3 A	Connector size	1
Stall current (100 K)	8.3 A	Degree of protection	IP65
Rotor moment of inertia	0.0028810 kgm <sup>2</sup>	Design acc. to Code I	IM B5 (compatible with 1FT6)
<div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Physical constants</b></div>		Temperature monitoring	Pt1000 temperature sensor
		Electrical connectors	Connector turnable
Torque constant	1.78 Nm/A	Color of the housing	
Voltage constant at 20° C	113.0 V/1000*min <sup>-1</sup>	Holding brake version	Permanent-magnet brake
Winding resistance at 20° C	0.54 Ω	Shaft end type	Plain shaft
Rotating field inductance	6.4 mH	Sensor design	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Electrical time constant	12.00 ms	<div style="border: 1px solid black; padding: 5px; text-align: center;"><b>Recommended Motor Module</b></div>	
Mechanical time constant	1.20 ms		
Thermal time constant	45 min		
Shaft torsional stiffness	21500 Nm/rad		
Net weight of the motor	35.0 kg		
Rated inverter current	9 A		
Maximum inverter current	27 A		
Maximum torque	46.00 Nm		

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### Gearbox data

Gearbox type	Planetary gearbox	Moment of inertia of gearbox	0.0002710 kgm <sup>2</sup>
Designation	SP 140S-MF2	Radial output shaft loading, max.	9450 N
Gearbox ratio	20	Axial output shaft load, max.	9870 N
Motor speed S3-60 %	4000 rpm	Efficiency of gearbox	0.94
Motor speed S1	2900 rpm	Torsional backlash	5 '
Output torque S1	360 Nm	Gearbox weight	17.00 kg
Rated output torque at duty type S3-60 %	600 Nm		

### Limiting data

Max. permissible speed (mech.)	9000 rpm
Max. permissible speed (inverter)	5100 rpm
Maximum torque	63.0 Nm
Maximum current	43.0 A

### Special design

J13 Mounting of SP+ planetary gearbox