

## Data sheet for SIMOTICS S-1FK7 servo geared motor



Figure similar

**MLFB-Ordering data**                      **1FK7032-5AK71-1UU3-Z**  
**A03**

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

Item no. :  
 Consignment no. :  
 Project :

Engineering data		Mechanical data	
Rated speed (100 K)	6000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	6	Motor type	Compact
Rated torque (100 K)	0.8 Nm	Shaft height	36
Rated current	1.4 A	Cooling	Natural cooling
Static torque (60 K)	0.85 Nm	Radial runout tolerance	0.035 mm
Static torque (100 K)	1.1 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.40 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	1.70 A	Vibration severity grade	Grade A
Moment of inertia	0.750 kgcm <sup>2</sup>	Connector size	1
<b>Physical constants</b>		Degree of protection	IP64
Torque constant	0.67 Nm/A	Design acc. to Code I	IM B5 (IM V1, IM V3)
Voltage constant at 20° C	45.0 V/1000*min <sup>-1</sup>	Temperature monitoring	KTY84 temperature sensor in the stator winding
Winding resistance at 20° C	5.20 Ω	Electrical connectors	Connectors for signals and power rotatable
Rotating field inductance	18.5 mH	Color of the housing	Standard (Anthracite RAL 7016)
Electrical time constant	3.60 ms	Holding brake	without holding brake
Mechanical time constant	2.20 ms	Shaft extension	Fitted key and keyway
Thermal time constant	25 min	Encoder system	Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole)
Shaft torsional stiffness	6500 Nm/rad		
Net weight of the motor	4.1 kg		
<b>Recommended Motor Module</b>			
Rated inverter current	3 A		
Maximum inverter current	6 A		
Maximum torque	3.90 Nm		



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### Gearbox data

Gearbox type	DYA compact planetary gear unit	Static torque	11.0 Nm
Designation	DYA	Output torque S1	9.5 Nm
Gearbox shaft end	Fitted key and keyway	Moment of inertia of rotor	0.750 kgcm <sup>2</sup>
Gearbox ratio	10	Maximum current	5.0 A
Rated speed	370 rpm	Static current	1.7 A
Rated power	0.37 kW	Weight	4.11 kg
Output speed at the gearbox shaft	600 rpm		
Acceleration torque max.	32 Nm		

### Special design

A03      1FK7-DYA, M2standstill=11Nm S1Output speed=370rpm (I=10)

### Limiting data

Max. permissible speed (mech.)	10000 rpm
Max. permissible speed (inverter)	12800 rpm
Maximum torque	4.5 Nm
Maximum current	7.0 A