

Article No. : 1FK7022-5AK21-1VG5-Z
J23

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

Item no. :
Consignment no. :
Project :



Figure similar

Engineering data	
Rated speed (100 K)	6,000 rpm
Number of poles	6
Rated torque (100 K)	0.6 Nm
Rated current	1.4 A
Static torque (60 K)	0.70 Nm
Static torque (100 K)	0.85 Nm
Stall current (60 K)	1.50 A
Stall current (100 K)	1.80 A
Moment of inertia	0.400 kgcm²

Physical constants	
Torque constant	0.46 Nm/A
Voltage constant at 20° C	29.0 V/1000*min ⁻¹
Winding resistance at 20° C	4.20 Ω
Rotating field inductance	9.1 mH
Electrical time constant	2.20 ms
Mechanical time constant	1.70 ms
Thermal time constant	18 min
Shaft torsional stiffness	3,000 Nm/rad
Net weight of the motor	3.7 kg

Recommended Motor Module	
Rated inverter current	2 A
Maximum inverter current	5 A
Maximum torque	2.00 Nm

Mechanical data	
Motor type	Permanent-magnet synchronous motor
Motor type	Compact
Shaft height	28
Cooling	Natural cooling
Radial runout tolerance	0.035 mm
Concentricity tolerance	0.08 mm
Axial runout tolerance	0.08 mm
Vibration severity grade	Grade A
Connector size	1
Degree of protection	IP65 and DE flange IP67
Design acc. to Code I	IM B5 (IM V1, IM V3)
Temperature monitoring	Pt1000 temperature sensor
Electrical connectors	Connectors for signals and power rotatable
Color of the housing	Standard (Anthracite RAL 7016)
Holding brake	without holding brake
Shaft end	Plain shaft
Encoder system	Encoder AM15DQ: absolute encoder 15 bits (resolution 32768, encoder-internal 16 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)

Gearbox data	
Gearbox type	Planetary gearbox SP+
Designation	SP 060S-MF1
Gearbox shaft end	Without feather key
Gear ratio + steps	5 (1-step)
Motor speed S3-60 %	7,500 rpm
Motor speed S1	3,300 rpm
Output torque S1	27 Nm
Rated output torque at duty type S3-60 %	50 Nm
Moment of inertia of gearbox	0.120 kgcm²
Radial output shaft loading, max.	2,800 N
Axial output shaft load, max.	2,400 N
Efficiency of gearbox	0.97
Torsional backlash	4 ´
Gearbox weight	1.90 kg

Limiting data	
Max. permissible speed (mech.)	10,000 rpm
Max. permissible speed (inverter)	9,990 rpm
Maximum torque	3.4 Nm
Maximum current	8.0 A

Data sheet for SIMOTICS S-1FK7 servo geared motor

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Figure similar

Special design

J23 Mounting of SP+ planetary gearbox