



Figure similar

MLFB-Ordering data

1FK7083-5AF71-1AH5-Z  
J09

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

### Engineering data

Rated speed (100 K) 3000 rpm

Number of poles 8

Rated torque (100 K) 10.5 Nm

Rated current 7.4 A

Static torque (60 K) 13.30 Nm

Static torque (100 K) 16.00 Nm

Stall current (60 K) 8.60 A

Stall current (100 K) 10.40 A

Moment of inertia 44.340 kgcm<sup>2</sup>

### Physical constants

Torque constant 1.52 Nm/A

Voltage constant at 20° C 97.0 V/1000\*min<sup>-1</sup>

Winding resistance at 20° C 0.40 Ω

Rotating field inductance 6.0 mH

Electrical time constant 15.50 ms

Mechanical time constant 1.41 ms

Thermal time constant 50 min

Shaft torsional stiffness 105000 Nm/rad

Net weight of the motor 33.7 kg

### Recommended Motor Module

Rated inverter current 9 A

Maximum inverter current 18 A

Maximum torque 27.80 Nm

### Mechanical data

Motor type Permanent-magnet synchronous motor

Motor type Compact

Shaft height 80

Cooling Natural cooling

Radial runout tolerance 0.050 mm

Concentricity tolerance 0.10 mm

Axial runout tolerance 0.10 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 KTY84 temperature sensor in the stator winding

Electrical connectors Connectors for signals and power rotatable

Color of the housing Standard (Anthracite RAL 7016)

Holding brake with holding brake

Shaft end Plain shaft

Encoder system Encoder IC2048S/R: incremental encoder sin/cos 1 Vpp 2048 S/R with C and D track



Figure similar

## MLFB-Ordering data

**1FK7083-5AF71-1AH5-Z**  
J09

### Gearbox data

Gearbox type	Planetary gearbox SP+	Moment of inertia of gearbox	8.440 kgcm <sup>2</sup>
Designation	SP 140S-MF1	Radial output shaft loading, max.	9900 N
Gearbox shaft end	With feather key	Axial output shaft load, max.	9870 N
Gear ratio + steps	10 (1-step)	Efficiency of gearbox	0.97
Motor speed S3-60 %	5000 rpm	Torsional backlash	3 '
Motor speed S1	2600 rpm	Gearbox weight	17.20 kg
Output torque S1	327 Nm		
Rated output torque at duty type S3-60 %	636 Nm		

### Special design

J09 Mounting of SP+ planetary gearbox

### Limiting data

Max. permissible speed (mech.)	6000 rpm
Max. permissible speed (inverter)	5900 rpm
Maximum torque	50.0 Nm
Maximum current	37.0 A

### Holding brake

Holding brake version	Permanent-magnet brake
Holding torque	22.0 Nm
Power supply voltage	DC 24 V ± 10 %
Coil current	0.9 A
Opening time	200 ms
Closing time	60 ms
Highest braking work	1400 J