

MLFB-Ordering data

1FK7042-5AF71-1FG0

Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Engineering data		Mechanical data	
Rated speed (100 K)	3000 rpm	Motor type	Permanent-magnet synchronous motor
Number of poles	8	Motor type	Compact
Rated torque (100 K)	2.6 Nm	Shaft height	48
Rated current	1.9 A	Cooling	Natural cooling
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm
Static torque (100 K)	3.00 Nm	Concentricity tolerance	0.08 mm
Stall current (60 K)	1.80 A	Axial runout tolerance	0.08 mm
Stall current (100 K)	2.20 A	Vibration severity grade	Grade A
Moment of inertia	3.010 kgcm ²	Connector size	1
Efficiency	89.0 %	Degree of protection	IP64
Physical constants		Design acc. to Code I	IM B5 (IM V1, IM V3)
		Temperature monitoring	KTY84 temperature sensor in the stator winding
Torque constant	1.40 Nm/A	Electrical connectors	Connectors for signals and power rotatable
Voltage constant at 20° C	89.0 V/1000*min ⁻¹	Color of the housing	without
Winding resistance at 20° C	5.15 Ω	Holding brake	without holding brake
Rotating field inductance	29.0 mH	Shaft end	Plain shaft
Electrical time constant	5.60 ms	Encoder system	Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions)
Mechanical time constant	2.37 ms		
Thermal time constant	30 min		
Shaft torsional stiffness	16000 Nm/rad		
Net weight of the motor	4.9 kg		

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Optimum operating point

Optimum speed 3000 rpm

Optimum power 0.8 kW

Limiting data

Max. permissible speed (mech.) 9000 rpm

Max. permissible speed (inverter) 6500 rpm

Maximum torque 10.5 Nm

Maximum current 7.4 A

Recommended Motor Module

Rated inverter current 3 A

Maximum inverter current 6 A

Maximum torque 8.40 Nm