

MLFB-Ordering data

1FK7042-5AK71-1DA5

Figure similar

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	8	Motor type	Compact		
Rated torque (100 K)	1.5 Nm	Shaft height	48		
Rated current	2.5 A	Cooling	Natural cooling		
Static torque (60 K)	2.50 Nm	Radial runout tolerance	0.040 mm		
Static torque (100 K)	3.0 Nm	Concentricity tolerance	0.08 mm		
Stall current (60 K)	3.60 A	Axial runout tolerance	0.08 mm		
Stall current (100 K)	4.40 A	Vibration severity grade	Grade A		
Moment of inertia	3.010 kgcm ²	Connector size	1		
Efficiency	89.0 %	Degree of protection	IP65 and DE flange IP67		
Physical constants		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	without holding brake		
		Shaft extension	Feather key		
		Encoder system	Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits		
		Torque constant	0.69 Nm/A		
		Voltage constant at 20° C	44.0 V/1000*min ⁻¹		
		Winding resistance at 20° C	1.20 Ω		
Rotating field inductance	6.7 mH				
Electrical time constant	5.60 ms				
Mechanical time constant	2.27 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		Recommended Motor Module	
Optimum speed	5000 rpm	Rated inverter current	5 A
Optimum power	1.0 kW	Maximum inverter current	10 A
Limiting data		Maximum torque	6.80 Nm
Max. permissible speed (mech.)	9000 rpm		
Max. permissible speed (inverter)	9990 rpm		
Maximum torque	10.5 Nm		
Maximum current	15.3 A		