



MLFB-Ordering data                      1FK7042-2AK74-1TG1

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)       | 3.00 Nm                       | Concentricity tolerance  | 0.08 mm                                    |
| Stall current (60 K)        | 3.55 A                        | Axial runout tolerance   | 0.08 mm                                    |
| Stall current (100 K)       | 4.40 A                        | Vibration severity grade | Grade A                                    |
| Moment of inertia           | 2.900 kgcm²                   | Connector size           | 1                                          |
| Efficiency                  | 89.0 %                        | Degree of protection     | IP65                                       |
| Physical constants          |                               | Design acc. to Code I    | IM B5 (IM V1, IM V3)                       |
| Torque constant             | 0.68 Nm/A                     | Temperature monitoring   | Pt1000 temperature sensor                  |
| Voltage constant at 20° C   | 44.5 V/1000*min <sup>-1</sup> | Electrical connectors    | Connectors for signals and power rotatable |
| Winding resistance at 20° C | 1.15 Ω                        | Color of the housing     | Standard (Anthracite RAL 7016)             |
| Rotating field inductance   | 8.6 mH                        | Holding brake            | without holding brake                      |
| Electrical time constant    | 7.50 ms                       | Shaft end                | Plain shaft                                |
| Mechanical time constant    | 2.15 ms                       | Encoder system           | Resolver 2-pole                            |
| Thermal time constant       | 30 min                        |                          |                                            |
| Shaft torsional stiffness   | 15500 Nm/rad                  |                          |                                            |
| Net weight of the motor     | 4.6 kg                        |                          |                                            |



Figure similar

MLFB-Ordering data                      1FK7042-2AK74-1TG1

| Optimum operating point           |          | Recommended Motor Module |          |
|-----------------------------------|----------|--------------------------|----------|
| Optimum speed                     | 5000 rpm | Rated inverter current   | 5 A      |
| Optimum power                     | 1.0 kW   | Maximum inverter current | 15 A     |
| Limiting data                     |          | Maximum torque           | 10.30 Nm |
| Max. permissible speed (mech.)    | 9000 rpm |                          |          |
| Max. permissible speed (inverter) | 9000 rpm |                          |          |
| Maximum torque                    | 10.5 Nm  |                          |          |
| Maximum current                   | 15.3 A   |                          |          |