



Figure similar

Article No. : 1FK7086-4CF71-1DH2

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

Item no. :  
Consignment no. :  
Project :

| Engineering data      |                          |
|-----------------------|--------------------------|
| Rated speed (100 K)   | 3,000 rpm                |
| Number of poles       | 8                        |
| Rated torque (100 K)  | 6.5 Nm                   |
| Rated current         | 5.7 A                    |
| Static torque (60 K)  | 23.00 Nm                 |
| Static torque (100 K) | 28.00 Nm                 |
| Stall current (60 K)  | 17.40 A                  |
| Stall current (100 K) | 21.50 A                  |
| Moment of inertia     | 25.000 kgcm <sup>2</sup> |
| Efficiency            | 93.0 %                   |

| Physical constants          |                               |
|-----------------------------|-------------------------------|
| Torque constant             | 1.30 Nm/A                     |
| Voltage constant at 20° C   | 84.5 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.12 Ω                        |
| Rotating field inductance   | 3.1 mH                        |
| Electrical time constant    | 26.50 ms                      |
| Mechanical time constant    | 0.46 ms                       |
| Thermal time constant       | 65 min                        |
| Shaft torsional stiffness   | 63,000 Nm/rad                 |
| Net weight of the motor     | 26.0 kg                       |

| Mechanical data          |                                                                                                                            |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Motor type               | Permanent-magnet synchronous motor                                                                                         |
| Motor type               | High Dynamic                                                                                                               |
| 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           | M40                                                                                                                        |
| 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            | with holding brake                                                                                                         |
| Shaft end                | Plain shaft                                                                                                                |
| Encoder system           | Encoder IC22DQ: incremental encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + commutation position 11 bits |

| Optimum operating point |           |
|-------------------------|-----------|
| Optimum speed           | 2,000 rpm |
| Optimum power           | 3.8 kW    |

| Limiting data                     |           |
|-----------------------------------|-----------|
| Max. permissible speed (mech.)    | 6,000 rpm |
| Max. permissible speed (inverter) | 6,000 rpm |
| Maximum torque                    | 105.0 Nm  |
| Maximum current                   | 115.0 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  | 1,400 J                |

| Recommended Motor Module |          |
|--------------------------|----------|
| Rated inverter current   | 30 A     |
| Maximum inverter current | 72 A     |
| Maximum torque           | 79.30 Nm |