



Figure similar

Article No. : 1FK7100-2AC71-1QB0

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

Item no. :  
Consignment no. :  
Project :

### Engineering data

|                       |                          |
|-----------------------|--------------------------|
| Rated speed (100 K)   | 2,000 rpm                |
| Number of poles       | 8                        |
| Rated torque (100 K)  | 14.5 Nm                  |
| Rated current         | 7.1 A                    |
| Static torque (60 K)  | 14.90 Nm                 |
| Static torque (100 K) | 18.00 Nm                 |
| Stall current (60 K)  | 6.80 A                   |
| Stall current (100 K) | 8.40 A                   |
| Moment of inertia     | 62.000 kgcm <sup>2</sup> |
| Efficiency            | 92.0 %                   |

### Physical constants

|                             |                                |
|-----------------------------|--------------------------------|
| Torque constant             | 2.14 Nm/A                      |
| Voltage constant at 20° C   | 138.0 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.55 Ω                         |
| Rotating field inductance   | 12.7 mH                        |
| Electrical time constant    | 23.00 ms                       |
| Mechanical time constant    | 1.95 ms                        |
| Thermal time constant       | 55 min                         |
| Shaft torsional stiffness   | 135,000 Nm/rad                 |
| Net weight of the motor     | 21.0 kg                        |

### Mechanical data

|                          |   |
|--------------------------|---|
| Motor type               | Permanent-magnet synchronous motor                    |
| Motor type               | Compact   |
| Shaft height             | 100   |
| 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     | IP64  |
| 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                | Feather key   |
| Encoder system           | Encoder AS20DQI: absolute encoder single-turn 20 bits |

### Optimum operating point

|               |           |
|---------------|-----------|
| Optimum speed | 2,000 rpm |
| Optimum power | 3.0 kW    |

### Limiting data

|                                   |           |
|-----------------------------------|-----------|
| Max. permissible speed (mech.)    | 5,000 rpm |
| Max. permissible speed (inverter) | 4,200 rpm |
| Maximum torque                    | 55.0 Nm   |
| Maximum current                   | 28.0 A    |

### Holding brake

|                       |                        |
|-----------------------|------------------------|
| Holding brake version | Permanent-magnet brake |
| Holding torque        | 23.0 Nm                |
| Power supply voltage  | DC 24 V ± 10 %         |
| Coil current          | 1.0 A                  |
| Opening time          | 300 ms                 |
| Closing time          | 70 ms                  |
| Highest braking work  | 3,380 J                |

### Recommended Motor Module

|                          |          |
|--------------------------|----------|
| Rated inverter current   | 9 A      |
| Maximum inverter current | 27 A     |
| Maximum torque           | 53.40 Nm |