



Figure similar

Article No. : 1FK7101-2AC71-1RA1

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)  | 20.5 Nm                  |
| Rated current         | 9.7 A                    |
| Static torque (60 K)  | 22.50 Nm                 |
| Static torque (100 K) | 27.00 Nm                 |
| Stall current (60 K)  | 10.00 A                  |
| Stall current (100 K) | 12.30 A                  |
| Moment of inertia     | 79.000 kgcm <sup>2</sup> |
| Efficiency            | 93.0 %                   |

### Physical constants

|                             |                                |
|-----------------------------|--------------------------------|
| Torque constant             | 2.15 Nm/A                      |
| Voltage constant at 20° C   | 144.5 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.34 Ω                         |
| Rotating field inductance   | 8.5 mH                         |
| Electrical time constant    | 25.00 ms                       |
| Mechanical time constant    | 1.62 ms                        |
| Thermal time constant       | 60 min                         |
| Shaft torsional stiffness   | 164,000 Nm/rad                 |
| Net weight of the motor     | 23.0 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           | 1.5   |
| Degree of protection     | IP65  |
| 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            | without holding brake   |
| Shaft end                | Feather key   |
| Encoder system           | Encoder AM20DQI: absolute encoder 20 bits (resolution 1048576, encoder-internal 512 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |

### Optimum operating point

|               |           |
|---------------|-----------|
| Optimum speed | 2,000 rpm |
| Optimum power | 4.3 kW    |

### Limiting data

|                                   |           |
|-----------------------------------|-----------|
| Max. permissible speed (mech.)    | 5,000 rpm |
| Max. permissible speed (inverter) | 4,000 rpm |
| Maximum torque                    | 80.0 Nm   |
| Maximum current                   | 40.5 A    |

### Recommended Motor Module

|                          |          |
|--------------------------|----------|
| Rated inverter current   | 18 A     |
| Maximum inverter current | 54 A     |
| Maximum torque           | 80.00 Nm |