



Figure similar

Article No. : 1FK7103-2AF71-1BA2

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)  | 14.0 Nm                   |
| Rated current         | 11.5 A                    |
| Static torque (60 K)  | 30.00 Nm                  |
| Static torque (100 K) | 36.00 Nm                  |
| Stall current (60 K)  | 21.00 A                   |
| Stall current (100 K) | 26.00 A                   |
| Moment of inertia     | 104.000 kgcm <sup>2</sup> |
| Efficiency            | 93.0 %                    |

### Physical constants

|                             |                               |
|-----------------------------|-------------------------------|
| Torque constant             | 1.39 Nm/A                     |
| Voltage constant at 20° C   | 89.5 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.09 Ω                        |
| Rotating field inductance   | 2.4 mH                        |
| Electrical time constant    | 27.00 ms                      |
| Mechanical time constant    | 1.46 ms                       |
| Thermal time constant       | 65 min                        |
| Shaft torsional stiffness   | 148,000 Nm/rad                |
| Net weight of the motor     | 28.5 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 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            | without holding brake                                 |
| Shaft end                | Feather key   |
| Encoder system           | Encoder AS24DQI: absolute encoder single-turn 24 bits |

### Optimum operating point

|               |           |
|---------------|-----------|
| Optimum speed | 2,500 rpm |
| Optimum power | 5.4 kW    |

### Limiting data

|                                   |           |
|-----------------------------------|-----------|
| Max. permissible speed (mech.)    | 5,000 rpm |
| Max. permissible speed (inverter) | 5,000 rpm |
| Maximum torque                    | 108.0 Nm  |
| Maximum current                   | 84.0 A    |

### Recommended Motor Module

|                          |           |
|--------------------------|-----------|
| Rated inverter current   | 30 A      |
| Maximum inverter current | 90 A      |
| Maximum torque           | 108.00 Nm |