



Figure similar

Article No. : 1FK7085-4CF71-1FG1

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         | 7.0 A        |
| Static torque (60 K)  | 18.30 Nm     |
| Static torque (100 K) | 22.00 Nm     |
| Stall current (60 K)  | 17.80 A      |
| Stall current (100 K) | 22.00 A      |
| Moment of inertia     | 22.000 kgcm² |
| Efficiency            | 92.0 %       |

| Physical constants          |                               |
|-----------------------------|-------------------------------|
| Torque constant             | 1.00 Nm/A                     |
| Voltage constant at 20° C   | 64.5 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.12 Ω                        |
| Rotating field inductance   | 3.7 mH                        |
| Electrical time constant    | 31.50 ms                      |
| Mechanical time constant    | 0.78 ms                       |
| Thermal time constant       | 65 min                        |
| Shaft torsional stiffness   | 84,000 Nm/rad                 |
| Net weight of the motor     | 23.0 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                                                                                                                                              |
| 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                | Plain shaft                                                                                                                                       |
| Encoder system           | Encoder AM22DQ: absolute encoder 22 bits (resolution 4194304, encoder-internal 2048 S/R) + 12 bits multi-turn (traversing range 4096 revolutions) |

| Optimum operating point |           |
|-------------------------|-----------|
| Optimum speed           | 2,500 rpm |
| Optimum power           | 3.1 kW    |

| Limiting data                     |           |
|-----------------------------------|-----------|
| Max. permissible speed (mech.)    | 6,000 rpm |
| Max. permissible speed (inverter) | 6,000 rpm |
| Maximum torque                    | 65.0 Nm   |
| Maximum current                   | 84.0 A    |

| Recommended Motor Module |          |
|--------------------------|----------|
| Rated inverter current   | 30 A     |
| Maximum inverter current | 72 A     |
| Maximum torque           | 59.80 Nm |