



Figure similar

Article No. : 1FK7100-2AF71-1UG0

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)  | 12.0 Nm                  |
| Rated current         | 8.0 A                    |
| Static torque (60 K)  | 14.90 Nm                 |
| Static torque (100 K) | 18.00 Nm                 |
| Stall current (60 K)  | 9.00 A                   |
| Stall current (100 K) | 11.10 A                  |
| Moment of inertia     | 54.000 kgcm <sup>2</sup> |
| Efficiency            | 92.0 %                   |

### Physical constants

|                             |                                |
|-----------------------------|--------------------------------|
| Torque constant             | 1.62 Nm/A                      |
| Voltage constant at 20° C   | 104.5 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.32 Ω                         |
| Rotating field inductance   | 7.3 mH                         |
| Electrical time constant    | 22.50 ms                       |
| Mechanical time constant    | 2.00 ms                        |
| Thermal time constant       | 55 min                         |
| Shaft torsional stiffness   | 183,000 Nm/rad                 |
| Net weight of the motor     | 17.6 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            | without holding brake                                                    |
| Shaft end                | Plain shaft                                                              |
| Encoder system           | Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole) |

### Optimum operating point

|               |           |
|---------------|-----------|
| Optimum speed | 3,000 rpm |
| Optimum power | 3.8 kW    |

### Limiting data

|                                   |           |
|-----------------------------------|-----------|
| Max. permissible speed (mech.)    | 5,000 rpm |
| Max. permissible speed (inverter) | 5,000 rpm |
| Maximum torque                    | 55.0 Nm   |
| Maximum current                   | 37.0 A    |

### Recommended Motor Module

|                          |          |
|--------------------------|----------|
| Rated inverter current   | 18 A     |
| Maximum inverter current | 54 A     |
| Maximum torque           | 55.00 Nm |