



Figure similar

MLFB-Ordering data

1FK7105-5AF71-1FH3

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Engineering data      |                           |
|-----------------------|---------------------------|
| Rated speed (100 K)   | 3000 rpm                  |
| Number of poles       | 8                         |
| Rated torque (100 K)  | 26.0 Nm                   |
| Rated current         | 18.0 A                    |
| Static torque (60 K)  | 40.00 Nm                  |
| Static torque (100 K) | 48.0 Nm                   |
| Stall current (60 K)  | 25.00 A                   |
| Stall current (100 K) | 31.00 A                   |
| Moment of inertia     | 169.000 kgcm <sup>2</sup> |
| Efficiency            | 94.0 %                    |

| Physical constants          |                                |
|-----------------------------|--------------------------------|
| Torque constant             | 1.57 Nm/A                      |
| Voltage constant at 20° C   | 100.0 V/1000*min <sup>-1</sup> |
| Winding resistance at 20° C | 0.07 Ω                         |
| Rotating field inductance   | 1.9 mH                         |
| Electrical time constant    | 26.00 ms                       |
| Mechanical time constant    | 1.40 ms                        |
| Thermal time constant       | 70 min                         |
| Shaft torsional stiffness   | 125000 Nm/rad                  |
| Net weight of the motor     | 41.5 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     | IP64  |
| Design acc. to Code I    | IM B5 (IM V1, IM V3)  |
| Temperature monitoring   | KTY84 temperature sensor in the stator winding  |
| Electrical connectors    | Connectors for signals and power rotatable  |
| Color of the housing     | Standard (Anthracite RAL 7016)  |
| Holding brake            | with holding brake  |
| Shaft extension          | 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) |

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### Optimum operating point

Optimum speed 3000 rpm

Optimum power 8.2 kW

### Limiting data

Max. permissible speed (mech.) 5000 rpm

Max. permissible speed (inverter) 5700 rpm

Maximum torque 150.0 Nm

Maximum current 109.0 A

### Holding brake

Holding brake version Permanent-magnet brake

Holding torque 43.0 Nm

Power supply voltage DC 24 V  $\pm$  10 %

Coil current 1.0 A

Opening time 300 ms

Closing time 70 ms

Highest braking work 3380 J

### Recommended Motor Module

Rated inverter current 30 A

Maximum inverter current 56 A

Maximum torque 87.00 Nm