

MLFB-Ordering data1FK7042-5AF71-1UA3



Client order no. :  
Order no. :  
Offer no. :  
Remarks :

Item no. :  
Consignment no. :  
Project :

| Engineering data            |                               | Mechanical data          |                                                                          |
|-----------------------------|-------------------------------|--------------------------|--------------------------------------------------------------------------|
| Rated speed (100 K)         | 3000 rpm                      | Motor type               | Permanent-magnet synchronous motor                                       |
| Number of poles             | 8                             | Motor type               | Compact                                                                  |
| Rated torque (100 K)        | 2.6 Nm                        | Shaft height             | 48                                                                       |
| Rated current               | 1.9 A                         | Cooling                  | Natural cooling                                                          |
| Static torque (60 K)        | 2.50 Nm                       | Radial runout tolerance  | 0.040 mm                                                                 |
| Static torque (100 K)       | 3.00 Nm                       | Concentricity tolerance  | 0.08 mm                                                                  |
| Stall current (60 K)        | 1.80 A                        | Axial runout tolerance   | 0.08 mm                                                                  |
| Stall current (100 K)       | 2.20 A                        | Vibration severity grade | Grade A                                                                  |
| Moment of inertia           | 3.010 kgcm²                   | Connector size           | 1                                                                        |
| Efficiency                  | 89.0 %                        | Degree of protection     | IP64                                                                     |
| Physical constants          |                               | Design acc. to Code I    | IM B5 (IM V1, IM V3)                                                     |
| Torque constant             | 1.40 Nm/A                     | Temperature monitoring   | KTY84 temperature sensor in the stator winding                           |
| Voltage constant at 20° C   | 89.0 V/1000*min <sup>-1</sup> | Electrical connectors    | Connectors for signals and power rotatable                               |
| Winding resistance at 20° C | 5.15 Ω                        | Color of the housing     | Standard (Anthracite RAL 7016)                                           |
| Rotating field inductance   | 29.0 mH                       | Holding brake            | without holding brake                                                    |
| Electrical time constant    | 5.60 ms                       | Shaft end                | Feather key                                                              |
| Mechanical time constant    | 2.37 ms                       | Encoder system           | Resolver R15DQ: resolver 15 bits (resolution 32768, internal multi-pole) |
| Thermal time constant       | 30 min                        |                          |                                                                          |
| Shaft torsional stiffness   | 16000 Nm/rad                  |                          |                                                                          |
| Net weight of the motor     | 4.9 kg                        |                          |                                                                          |

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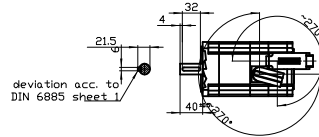
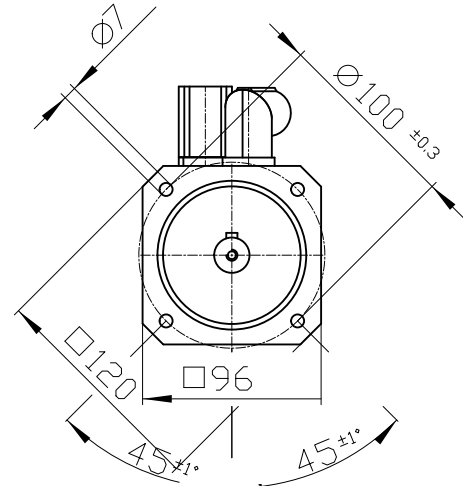
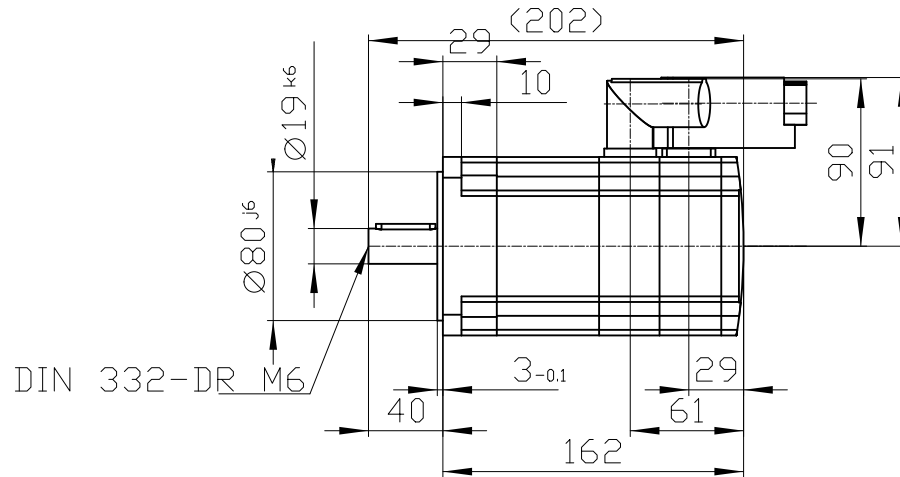
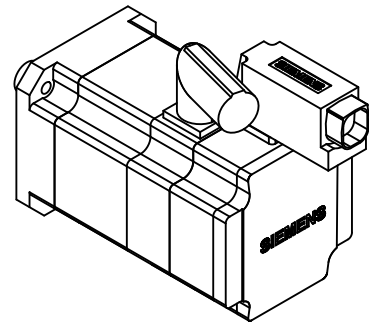
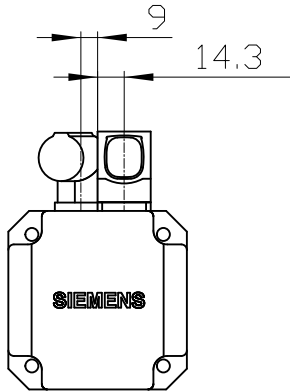
| Optimum operating point           |          | Recommended Motor Module |         |
|-----------------------------------|----------|--------------------------|---------|
| Optimum speed                     | 3000 rpm | Rated inverter current   | 3 A     |
| Optimum power                     | 0.8 kW   | Maximum inverter current | 6 A     |
| Limiting data                     |          | Maximum torque           | 8.40 Nm |
| Max. permissible speed (mech.)    | 9000 rpm |                          |         |
| Max. permissible speed (inverter) | 6500 rpm |                          |         |
| Maximum torque                    | 10.5 Nm  |                          |         |
| Maximum current                   | 7.4 A    |                          |         |

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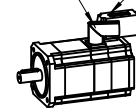
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Connector size 1 = M23;  
6-pole for power and brake 10-pole RJ45 socket



|            |  |                    |
|------------|--|--------------------|
|            |  | -                  |
| Unit       |  | mm [in]            |
| Date       |  | 3/7/23             |
| SIEMENS AG |  | 1FK7042-5AF71-1UA3 |
| -          |  | -                  |
| DT         |  |                    |