

Data sheet for SIMOTICS S-1FK7



MLFB-Ordering data 1FK7060-2AH71-1QB0

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

Item no. :  
Consignment no. :  
Project :

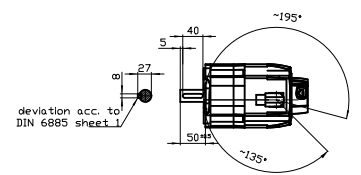
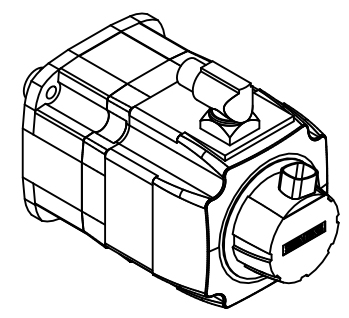
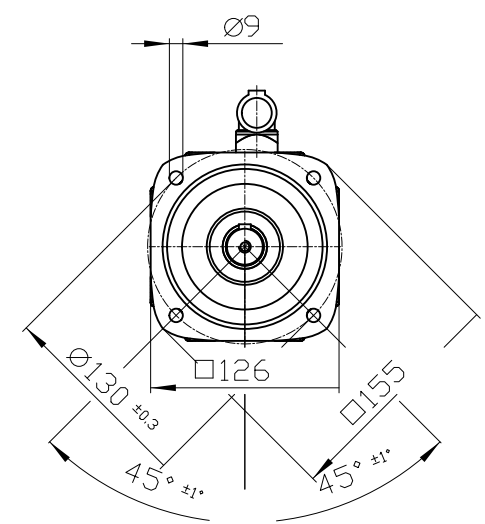
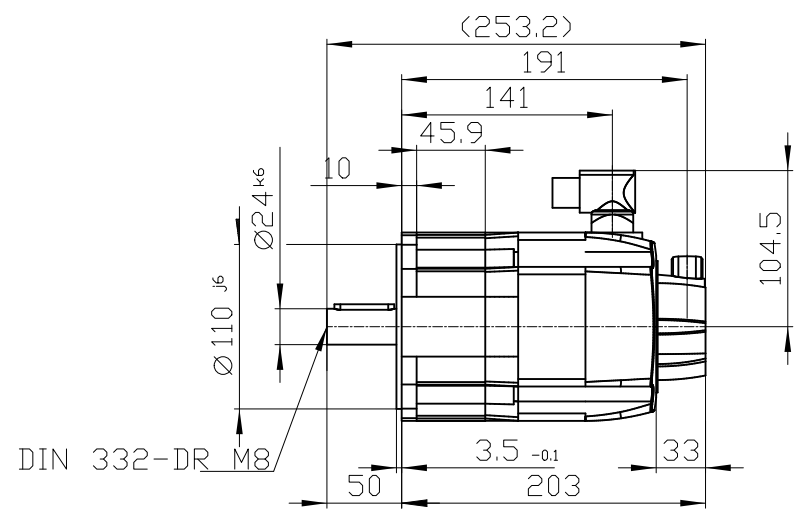
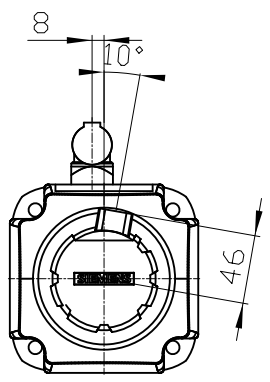
| Engineering data            |                               | Mechanical data          |                                                       |
|-----------------------------|-------------------------------|--------------------------|-------------------------------------------------------|
| Rated speed (100 K)         | 4500 rpm                      | Motor type               | Permanent-magnet synchronous motor                    |
| Number of poles             | 8                             | Motor type               | Compact                                               |
| Rated torque (100 K)        | 3.7 Nm                        | Shaft height             | 63                                                    |
| Rated current               | 4.3 A                         | Cooling                  | Natural cooling                                       |
| Static torque (60 K)        | 5.00 Nm                       | Radial runout tolerance  | 0.040 mm                                              |
| Static torque (100 K)       | 6.00 Nm                       | Concentricity tolerance  | 0.10 mm                                               |
| Stall current (60 K)        | 5.10 A                        | Axial runout tolerance   | 0.10 mm                                               |
| Stall current (100 K)       | 6.30 A                        | Vibration severity grade | Grade A                                               |
| Moment of inertia           | 8.700 kgcm²                   | Connector size           | 1                                                     |
| Efficiency                  | 90.0 %                        | Degree of protection     | IP64                                                  |
| Physical constants          |                               | Design acc. to Code I    | IM B5 (IM V1, IM V3)                                  |
| Torque constant             | 0.95 Nm/A                     | Temperature monitoring   | Pt1000 temperature sensor                             |
| Voltage constant at 20° C   | 60.5 V/1000*min <sup>-1</sup> | Electrical connectors    | Connectors for signals and power rotatable            |
| Winding resistance at 20° C | 0.69 Ω                        | Color of the housing     | Standard (Anthracite RAL 7016)                        |
| Rotating field inductance   | 7.6 mH                        | Holding brake            | with holding brake                                    |
| Electrical time constant    | 10.90 ms                      | Shaft end                | Feather key                                           |
| Mechanical time constant    | 1.78 ms                       | Encoder system           | Encoder AS20DQI: absolute encoder single-turn 20 bits |
| Thermal time constant       | 30 min                        |                          |                                                       |
| Shaft torsional stiffness   | 28500 Nm/rad                  |                          |                                                       |
| Net weight of the motor     | 8.5 kg                        |                          |                                                       |



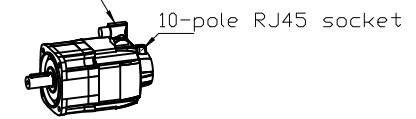
Figure similar

MLFB-Ordering data                      1FK7060-2AH71-1QB0

| Optimum operating point           |                        | Recommended Motor Module |          |
|-----------------------------------|------------------------|--------------------------|----------|
| Optimum speed                     | 4500 rpm               | Rated inverter current   | 9 A      |
| Optimum power                     | 1.7 kW                 | Maximum inverter current | 27 A     |
| Limiting data                     |                        | Maximum torque           | 18.00 Nm |
| Max. permissible speed (mech.)    | 7200 rpm               |                          |          |
| Max. permissible speed (inverter) | 7200 rpm               |                          |          |
| Maximum torque                    | 18.0 Nm                |                          |          |
| Maximum current                   | 21.5 A                 |                          |          |
| Holding brake                     |                        |                          |          |
| Holding brake version             | Permanent-magnet brake |                          |          |
| Holding torque                    | 13.0 Nm                |                          |          |
| Power supply voltage              | DC 24 V ± 10 %         |                          |          |
| Coil current                      | 0.8 A                  |                          |          |
| Opening time                      | 100 ms                 |                          |          |
| Closing time                      | 50 ms                  |                          |          |
| Highest braking work              | 380 J                  |                          |          |



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



|            |  |         |                    |
|------------|--|---------|--------------------|
|            |  |         |                    |
| Unit       |  | mm [in] | 1FK7060-2AH71-1QB0 |
| Date       |  | 3/16/23 |                    |
| SIEMENS AG |  |         |                    |
|            |  | DT      |                    |

Copyright© Siemens AG 2005  
The reproduction or use of this document or its contents is not permitted without express written authority. Siemens AG and its subsidiaries are not liable for damages. All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

Copyright© Siemens AG 2005  
Confido a tire de secret d'entreprise. Tous droits reserves. Confido como secreto industrial. Nos reservamos todos los derechos. Comunicado como segredo empresarial. Reservados todos os direitos.

Copyright© Siemens AG 2005  
Weitergabe sowie Vervielfältigung dieser Unterlage, Vervielfältigung und Mitteilung ihres Inhalts nicht gestattet, soweit nicht ausdrücklich zugestanden. Zuwiderhandlungen verpflichten zu Schadenersatz. Alle Rechte vorbehalten, insbesondere fuer den Fall der Patenterteilung oder der Eintragung.